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DETECTING THE DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA: THE ROLE OF JAPAN'S BALLISTIC MISSILE DEFENSE

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DETECTING THE DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA:
THE ROLE OF JAPAN'S BALLISTIC MISSILE DEFENSE

by

Jonathan Trexel

A DISSERTATION

Presented to the Faculty of
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DETECTING THE DEMOCRATIC PEOPLE'S REPUBLIC OF KOREA:
THE ROLE OF JAPAN'S BALLISTIC MISSILE DEFENSE

Jonathan Trexel, Ph.D.

University of Nebraska, 2013

Advisor: Ross Miller

This dissertation explores the role of Japan's ballistic missile defense (BMD) program and its deterrent effect upon North Korean behavior. A mixed-methods approach is employed to analyze the topic. Empirical quantitative data included tabulated monthly cooperative-conflictual behavioral interaction between Japan and North Korea spanning a 22-year timeframe (1990-2011). In addition, a strategic profile developed from deterrence theory provided essential qualitative background to compliment the quantitative analysis. Japan's BMD program was divided into four periods reflecting decision points or phases of program development. Results indicated varied BMD deterrence effectiveness, with two periods indicating Japan's BMD program strengthened deterrence, one period indicating it undermined deterrence, and one period it had no effect.

DEDICATION

This dissertation is dedicated to my parents, Joe and Darlene Trexel. Neither one of them ever enrolled in a college or university, but my Mom always encouraged me to pursue higher education. When I was younger my Dad told me to strive to be a lifelong learner. Hopefully, completion of my dissertation reflects well on both of their expectations. Without a doubt, though, I still have a great deal to learn.

ACKNOWLEDGEMENTS

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TABLE OF CONTENTS

List of Tables and Figures.....	vii
Chapter One: Introduction.....	1
Chapter Two: History.....	28
Chapter Three: Literature Review.....	71
Chapter Four: Research Design.....	121
Chapter Five: Strategic Profile – Part I.....	157
Chapter Six: Strategic Profile – Part II.....	195
Chapter Seven: Quantitative Analysis.....	247
Chapter Eight: Conclusions.....	302
Appendix 1: Methodology Historical Background.....	334
Appendix 2: Integration of Missile Defense-Deterrence Theoretic Arguments.....	336
Bibliography.....	354

LIST OF TABLES AND FIGURES

Tables

Table 1: Arguments.....	118
Table 2: Summary of Missile Defense-Deterrence Arguments.....	128
Table 3: Positive/Cooperative North Korean Behavior toward Japan, January 1990—December 2011.....	274
Table 4: Negative/Conflictual North Korean Behavior toward Japan, January 1990—December 2011.....	277
Table 5: Tests for Autocorrelation among Model Variables.....	290
Table 6: R ² Values for all Models.....	295
Table 7: Distributions of Data with BMD Terms by Time Period.....	298
Table 8: Goldstein Conflictual-Cooperation Event Scale.....	301
Table 9: Overview of Theoretic Arguments and BMD Periods.....	351

Figures

Figure 1: North Korean Medium and Long-Range Missiles.....	5
Figure 2: North Korean Ballistic Missile Ranges.....	7
Figure 3: Dataset Sample.....	257
Figure 4: Japan's BMD Program, J-NK Interaction, and other Key Events.....	262
Figure 5: Traditional General Deterrence vs. Goldstein Scale.....	324

CHAPTER ONE: INTRODUCTION

The threat from North Korea is daunting: there are large numbers of offensive ballistic missiles; possible possession of missile-capable nuclear weapons; and, a propensity for risky behavior such as export of nuclear and missile technology. In Northeast Asia, North Korea's large stockpile of missiles can, in a matter of minutes, endanger military, civil, and economic targets in neighboring countries like Japan. But while North Korean possession of ballistic missiles provides it cover for a wide variety of coercive behavior short of war, Japanese possession of missile defenses could offset the North Korean ballistic missile advantage and, in part, deter North Korea's coercive behavior. The key question, then, is *Does Japan's BMD deter North Korea's behavior?* Or, does Japan's BMD undermine it? Are these deterrence effects seen in any specific periods of Japan's BMD program?

As a way to familiarize the reader with the research undertaken to address this question, this introductory chapter is outlined as follows. First, a brief review of the research findings will be presented. These findings are a short summary of those provided later in the dissertation. Second, a short section of background material is provided briefly describing the setting, including the nature of the North Korean threat as well as Japan's BMD program. Third, theoretic ideas will be described along with key gaps. Fourth, the dissertation's subsequent chapters will be summarized. Lastly, some closing thoughts will be providing as a segue to Chapter Two: History.

General Findings

The mixed-methods research and analysis explored the question of whether Japan's BMD deterred North Korea and whether other alternative factors, such as the role

of the U.S. or China, contributed to North Korea's behavior toward Japan. In reference to the direct question of Japan's BMD, the research indicated that Japan's BMD was correlated with cooperative North Korean behavior toward Japan in some circumstances and conflictual North Korean behavior toward Japan in others. This was consistent with the missile defense-deterrence literature.

First, Japan's BMD program during the period immediately following North Korea's 1998 TD-1 launch (September 1998 – November 2003), marked by a high commitment in Japan to BMD research and development, had a positive effect upon North Korean cooperative behavior toward Japan. Using identified deterrence effectiveness criteria, these results suggest Japan's BMD *strengthened deterrence* against North Korea in this period. Second, Japan's BMD program in the period surrounding (and following) North Korea's TD-2 missile launch (February 2009 – December 2011), when Japan's leadership operationally employed their BMD to the field (manned and ready to shoot), reduced North Korean conflictual behavior toward Japan. Using the deterrence effectiveness criteria, these results suggest Japan's BMD *strengthened deterrence* against North Korea also during this period. Third, Japan's BMD program in the period following Japan's initial deployment of its first operational BMD capabilities (March 2007 – December 2011) increased conflictual North Korean behavior toward Japan. Using the criteria identified, these results indicate the initial deployment of Japan's BMD *undermined deterrence* against North Korea in this period. Fourth, Japan's BMD program in the period following the formal decision by Japan's leadership to acquire and field its own BMD system (December 2003 – February 2007) did not reflect statistically significant cooperative or conflictual North Korean behavior toward Japan. These results

indicate Japan's formal decision period had *no deterrence effect* against North Korea in this period. Japan's BMD, therefore, varied in deterrence effectiveness, an outcome generally supported across the totality of deterrence literature.

More broadly, given their historical interaction, increasingly conflictual interaction between North Korea and Japan was expected to characterize their overall relationship. However, this was not reflected in the analyses. Significant cooperative interaction was revealed in the data and analysis and the patterns of interaction do not appear to yield large swings of either *reductions* to cooperative North Korean behavior toward Japan or increases to *conflictual* North Korean behavior toward Japan. BMD did not appear to be a contributor to any worsening of the Japan-North Korea relationship generally. Japan's BMD did, however, appear to be correlated with favorable shifts in provocative and coercive North Korean behavior toward Japan with ballistic missiles in the later (TD-2) BMD period.

Given the hostile relationship between North Korea and the U.S., and the alliance between the U.S. and Japan, increasingly conflictual interaction between North Korea and Japan was expected. However, the statistical analyses did not support this expectation. None of the models with U.S. behavioral variables significantly affected either cooperative or conflictual North Korean behavior toward Japan, nor did they change any of Japan's BMD-related variables in any significant way.

The expectation that China's influence over North Korea would affect North Korea's behavior toward Japan was supported by the statistical analyses. This was reflected with cooperative PRC behavior toward North Korea indicating an increase in North Korea's cooperative behavior toward Japan. Cooperative Chinese action toward

North Korea, possibly including inducements, predictably strengthened North Korea's cooperative interaction with Japan. Such an outcome would generally support China's strategic interests. While cooperative Chinese behavior toward North Korea was statistically significant in cooperative North Korean behavior toward Japan generally, the analysis did not indicate correlation of Chinese behavior toward North Korea and Japan's BMD program variables.

Background & Setting

The North Korean Threat

Within the scope of all the security problems facing the world today, few are more important than the challenges of the state of North Korea. Much has been written addressing the military threat, its development of nuclear weapons, prospects of conflict on the Korean Peninsula, its reclusiveness, its pariah status, and its leaders and their peculiar ways. Western observers generally see North Korea only as a threat to security. For example, Gavan McCormack claimed that of the 600 books written about North Korea since the 1990s, nearly all portrayed North Korea as "virulently hostile" (Shin, Park, & Yang, *Rethinking Historical Injustice and Reconciliation in Northeast Asia: The Korean Experience*, 2007).¹ To be sure, the modern regime in North Korea *is* today a threat to Japan, with ballistic missiles, weapons of mass destruction (WMD), and provocative behavior.² Indeed, North Korea regularly parades its ballistic missiles through the center of Pyongyang, not only for domestic audiences, but as a source of confidence in their coercion strategy.³ However, North Korea is also a relational actor

¹ In his chapter, "Difficult Neighbors: Japan and North Korea." Page 155.

² Politically, North Korea has been described with exasperation as an "impossible state" (Cha, 2012).

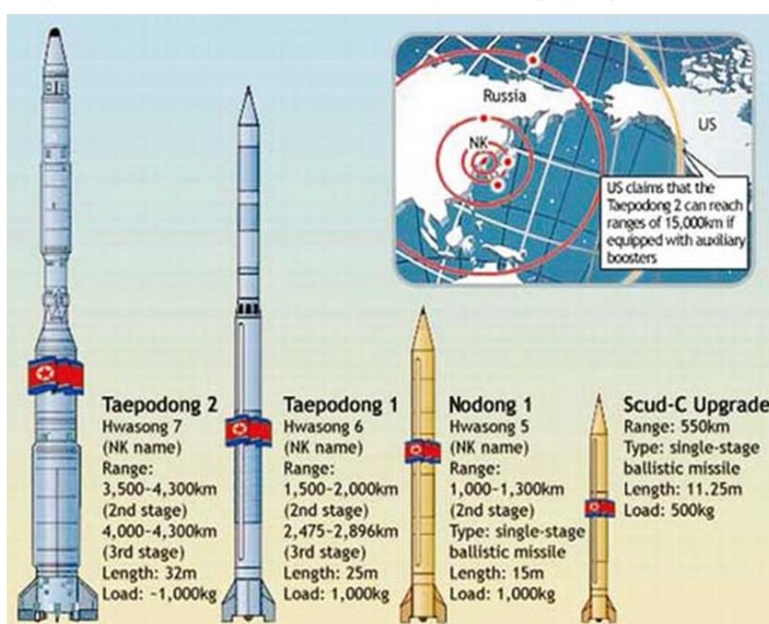
³ On North Korea's strategy of coercion, see, for example: Sugio Takahashi (Takahashi, *Ballistic Missile Defense in Japan: Deterrence and Military Transformation*, 2012), page 23; Paul French (French, 2007),

and the threat it poses to Japan today is but the latest chapter in a two-millennia-long story of conflictual *and cooperative* interaction. Little research or writing, however, has addressed Japan's relationship with North Korea in the modern context of Japan's development of BMD.

North Korea's ballistic missile program began in the early 1960s and has become an integral part of the North's security motivations and overall coercion strategy. North Korea's offensive ballistic

missile program has flourished and includes large numbers, types, and ranges of missiles and it has become a major exporter of missiles and related technology, though this activity has declined in recent years.

Figure 1: North Korean Medium and Long-Range Missiles



Today, North Korea possesses short-range Scud, medium-range Nodong, intermediate-range Musudan and, under development, intercontinental-range Taepodong missiles.

pages 223-4 and 228; in Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture" (Schneider & Post, 2002), pages 129-30, where Baird indicates, for example, the August 1998 missile test that overflew Japan was a "nuanced" method of pressure or coercion, implying the threat of worse action in the future if regional actors did not provide North Korea needed; Keith Payne (Payne K. B., 1996), pages 30-5; Narushige Michishita's chapter, "North Korea's Military-Diplomatic Campaign Strategies: Continuity versus Change" (Pollack, 2004), pages 59-62; Kerry Kartchner (Kartchner, 2002), pages 2-4; Rex Kiziah (Kiziah, 2000), page 6; Dean Wilkening and Kenneth Watman (Wilkening & Watman, 1995), page 32; and, DoD (Ballistic Missile Defense Review Report, 2010), page iii. Generally, North Korea's past behavior has included violent acts on the order of the sinking of the Cheonan, artillery strikes into South Korea, political assassinations, bombings, acts of terror, kidnappings, and missile and nuclear weapons related provocations.

Figure 1 shows some key North Korean missiles that threaten Japan and others (Public Affairs Office, 2010).⁴ Hundreds of North Korea's offensive ballistic missiles are within range of Japan, some of them assessed to be capable of carrying weapons of mass destruction (Pinkston, 2008).⁵ Tokyo, as the center for Japan's economic and political activity, is especially vulnerable. See Figure 2 for a map depicting North Korean ballistic missiles that could threaten Japan and their ranges.⁶ These offensive missile systems provide a backdrop for North Korea's coercive, and sometimes provocative and violent, behavior. Effectively countering ballistic missiles could potentially influence (deter) North Korea by moderating its behavior in its regional strategy toward Japan. Theoretically, some doubt missile defenses can deter adversaries.⁷

BMD and Japan

The principal purpose of missile defense is to provide crisis or wartime kinetic intercept and destruction of ballistic missiles, cruise missiles, and aircraft in flight.⁸ In general, though, it is argued that missile defenses are used to dissuade the development of ballistic missiles, deter their use if developed, and defeat their use in attack (Department of Defense, 2010).⁹ Missile defenses provide opportunities for other benefits to nations

⁴ Figure taken from page 11.

⁵ Pages 2-30.

⁶ A figure copied from the DoD *Ballistic Missile Defense Review Report* (2010); page 5.

⁷ Barak Mendelsohn argues, for example, that Israeli possession of missile defenses did not Iraqi Scud attacks in the Persian Gulf War. See, "Israeli self-defeating deterrence in the 1991 Gulf War," *Journal of Strategic Studies*, 26:4, pp. 83-107, 2003. Stephen F. Cimbala argues adversaries will simply develop technical countermeasures to missile defenses or simply develop non-standard methods of attack. See, "Deterrence and Friction: Implications for Missile Defense, *Defense & Security Analysis*, Vol. 18, No. 3, pp. 201-220, 2002.

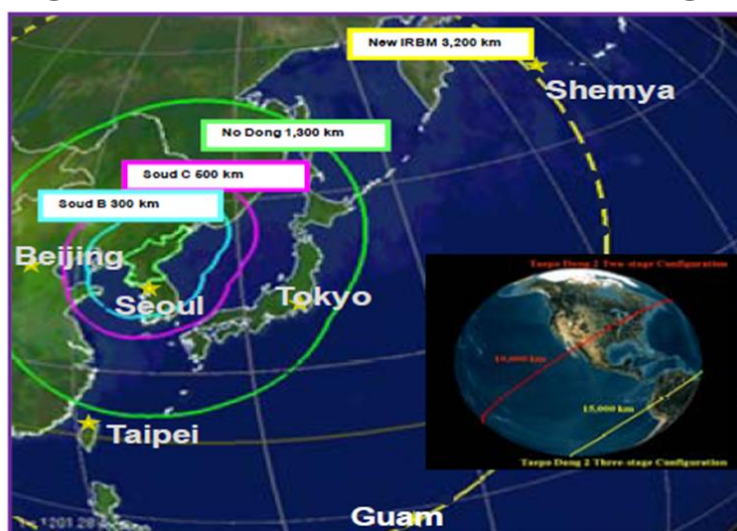
⁸ BMD has been used defensively, though not always with sterling results. For example, the U.S. Patriot was used in 1991 against Iraqi missiles; the U.S. PAC-3 (Patriot Advanced Capability) was used against Iraq again in 2003; the U.S. used a modified SM-3 (Standard Missile) from an Aegis-class BMD ship in *Operation Burnt Frost* in 2009 to shoot down a failing satellite; and, the Israeli Iron Dome was used against short-range missiles in 2011 and 2012.

⁹ See page 11.

under missile attack, including damage limitation to military forces, population centers, industry, leadership, and critical infrastructure.

Japan has begun to emerge somewhat quietly from a strict “pacifist” nation, a consequence of its World War II defeat (Chanlett-Avery & Nikitin, Japan's Nuclear Future: Policy Debate, Prospects, and U.S. Interests, 2009).¹⁰ To the surprise of some, Japan has reinterpreted portions of its postwar constitution for the sake of addressing national security concerns like North Korea. It has also modernized its military, including the purchase of 42 F-35 stealth fighters from the U.S. (Takenaka, 2011). Further, in 1998 North Korea tested a Taepodong-1 ballistic missile over Japan, an event that frightened Japan’s population and surprised

Figure 2: North Korean Ballistic Missile Ranges



its leadership. This event stirred Japan’s leaders toward BMD, a program demanding significant financial and political commitment.¹¹ Having cost \$12 billion so far, Japan’s missile defense system is now the second best in the world, behind the United States’

¹⁰ Page 1.

¹¹ Japan’s economy struggled in the late 1990s (Kaiharu, 2008). Despite this, after the 1998 TD-1 launch over Japan, the government of Japan committed large resources to BMD. On the other hand, BMD was good, if not essential, for Japan’s defense industry. There was an economic angle to pursuing BMD as well as a long-term consideration for maintaining the health of the defense industry with both technology and capacity in order to hedge against emerging and future threats. In 1995, prior to the start of Japan’s heavy investment in BMD following the 1998 North Korean TD-1 launch over Japan, “the survival of the defense industry” in both Japan and the U.S. was an “urgent” issue (NIKKEI SANGYO SHIMBUN, 1995).

(Dawson, 2012).¹² For Japan, BMD represented a strategic choice, not only for defense of Japan in potential wartime contingencies, but also for deterring North Korea's coercive behavior in peacetime.

Japan possesses a multilayered missile defense system capable of engaging ballistic missiles at various distances and altitudes. This includes sea-based Aegis midcourse defenses that use SM-3 missiles capable of intercepting short, medium, and intermediate-range ballistic missiles. The Japanese system also includes land-based Patriot or PAC-3 missiles capable of engaging incoming missiles in the terminal phase of flight. Tokyo is the primary area of defense (Kang & Lee, 2009).¹³ Japan's BMD system is a very capable one. Twomey suggests, "The United States and Japan deploy the most successful area defense program," adding, "the existing system already enables Japan to protect its home islands against a North Korean threat with only one or two Kongo-class ships 'on station.' Japan's current fleet of six ships allows for adequate coverage and continual time on station, if Tokyo chooses" (Twomey, 2011).¹⁴

Japan's BMD is comparable to the early U.S. antiballistic missile (ABM) system as well as the more recent U.S. national missile defense in terms of its technological development and emergence overall in a small number of key programmatic phases. There were also similarities in the life-saving potential given the nature of the threat.¹⁵

¹² The number two ranking was based on system sophistication, not numbers of interceptors deployed. The commitment accounts for about 15% of Japan's entire defense budget (O'Donogue, 2000); pages 8-11.

¹³ See also Masako Toki (Toki, 2009).

¹⁴ Page 62. Japan's own BMD capabilities were first deployed in March, 2007 two and one-half years after the initial operational deployment of U.S. Ground-Based Midcourse Defenses (GMD) interceptors in September, 2004 (Samson, 2010); page 45. Samson points out that initial operational fielding by the U.S. was rushed and was followed by systemic failures.

¹⁵ In the early Cold War period, for example, the U.S. ABM system was once considered simply as a defensive system that would save lives in a nuclear conflict, perhaps as many as 50 million (Adams, 1971);

However, there are key national security related differences between the two systems. For example, in their discussion of geopolitics and deterrence, Patrick Morgan and George Quester state that the U.S. strategy adopted to address regional security problems following World War II was extended nuclear deterrence—an approach to deterring conventional attack on an ally by threats of punishment, not by “denial” deterrence with vast defensive capabilities (Shultz, Drell, & Goodby, 2011).¹⁶ For Japan, the problem with this approach was that North Korean ballistic missiles could attack Japan directly with conventional or WMD payloads, meaning Japan’s hope for its security would be dependent on others: the U.S. and North Korea. First, Japan would depend upon North Korea believing U.S. post-attack punishment threats provided in extended deterrence would be credible to avoid the initial North Korean attack in the first place. Any benefit-denial capability of U.S. national missile defense, developed later, was sufficient only for protecting the *United States* from attacks; they simply could not cover Japan against North Korean missiles like the Nodong.¹⁷ The second problem with this approach was that Japan would need to depend upon the U.S. actually carrying through with punishing

page 150. Later, both the U.S. and USSR came to see defenses more as a means for protecting their nuclear strike forces.

¹⁶ In Chapter 1, “How History and the Geopolitical Context Shape Deterrence.” Page 8.

¹⁷ In May, 1993, North Korea tested four missiles including a Nodong-1 launched toward a buoy between North Korea and Japan, an event deemed threatening by Japan’s leaders (Burns, 2010); page 97. Reducing the “coercive influence” of Iran’s ballistic missiles is one of the purposes of U.S. BMD expressed by the U.S. Department of Defense (Fact Sheet: The Phased Adaptive Approach for Missile Defense in Europe, 2009); page 2. Influencing Iranian behavior with missile defenses, despite U.S. overwhelming conventional and nuclear offensive power, is remarkable in that it supports the notion that regional “rogue” actors like Iran and North Korea are less likely to be deterred by U.S. nuclear weapons and, instead pursue asymmetric capabilities, including ballistic missiles and WMD, both to deter others and undergird coercive behavior. Japan’s BMD, likewise, was intended to have a comparable effect on North Korean behavior by diminishing the value of their ballistic missiles to coerce in peacetime or achieve operational benefits in crisis or conflict.

an attacker if deterrence failed. Unfortunately, U.S. credibility with Japan has waned.¹⁸

With deterrence depending on U.S. credibility *and* North Korean willingness to acquiesce, Japan chose to acquire its own BMD capability which not only contributes to conflict deterrence through defense of wartime missile attacks, but *deterrence* of North Korean coercive behavior toward Japan in pre-conflict conditions through perceptual effects on North Korean decision factors that U.S. nuclear retaliation forces cannot provide.¹⁹

Literature Gaps

In general, deterrence literature in recent years has begun moving beyond basic questions of Cold War nuclear deterrence, comparing strategic forces, international relations issues such as arms control, and cases involving the North Atlantic Treaty Organization (NATO). More recently, for example, the literature provided additional insight into expansion of deterrence concepts beyond merely fear of cost-imposition to a broader idea of “influence” of an adversary’s perceptions (U.S. Department of Defense,

¹⁸ Regarding wartime contingencies and the prospects of U.S. punishment of regional adversaries who would attack Japan, doubts have emerged within various circles inside Japan that helped fuel the need to acquire and deploy an autonomous Japanese BMD capability. Frank Miller, for example, suggested “The US must recognize the huge shift in Japanese political circles on nuclear weapons that has occurred as a result of generational change and Chinese and North Korean programs. Senior Japanese officials and politicians are uncertain whether the US has the political will and/or nuclear capability to extend deterrence. While the deterrent may be credible in aggressors’ eyes, we have a major assurance problem” (Murdock, et al., 2009); quote by Frank Miller in a briefing to the CSIS Workshop (June 2009); page 46. But the problem of Japanese uncertainty over U.S. extended deterrence commitments—and Japan’s decision to acquire BMD—goes years further back from this workshop described by some as more of a problem of trust. Even as Japanese leaders were contemplating the decision to acquire Japan’s own BMD system, one of the considerations in their calculus was supposedly “a certain level of distrust vis-à-vis the credibility of the U.S. nuclear umbrella” (Urayama, 2000); page 618. These factors moved Japan toward BMD acquisition and deployment—of little surprise when considered together.

¹⁹ See also Colin S. Gray on how BMD deters an adversary’s freedom of action either to intimidate or attack (Peoples, 2010); pages 186-9. Borrowing from Clausewitz’s notion that war is an instrument of policy, and citing cases of defensive-dominated conflicts, Gray argues that technology and defenses in general have been lost in modern deterrence theory, caught in Cold War logic of parity. Several pros and cons of Japan pursuing BMD emerged. It was clear to Swaine, et al, that Japan’s BMD program would “exert a significant influence” on its relations with regional actors (Swaine, Swanger, & Kawakami, 2001); pages 4-8. See also Lars Abmann for a summary of BMD pros and cons (Abmann, 2007).

2006) and recent recognition of deterrent implications (both positive and negative) of missile defenses. However, very little deterrence literature involves Asia and most missile defense-deterrence literature addresses U.S. national missile defense issues, with most of those relative to deterring nuclear war. Of the 30+ missile defense related books, and several similar articles located and reviewed on missile defense-deterrence, none were devoted to the deterrence effect of Japan's missile defenses toward North Korea over time under general deterrence conditions.²⁰ Further, of the 54 specific arguments identified on whether missile defenses strengthen or undermine deterrence, none of the arguments were based upon research of the Japan-North Korea case and there simply is not definitive discussion of ballistic missile defense (BMD) in the Japan-North Korea case under general deterrence conditions over time using empirical data.²¹

One problem was the limitation of the traditional view of general deterrence, described in the 1980s by Patrick Morgan as a purposeful managing of an existing adversarial relationship between two states under relatively peaceful, status quo conditions. Theoretically, general deterrence fails when one of the two parties creates a crisis by considering an attack on the other (called immediate deterrence) with a view that war may be imminent (Dougherty & Pfaltzgraff, 2001).²² The theoretic options were peacetime, crisis, or war, with no meaningful levels of fidelity to the range of peacetime

²⁰ A small sample: Michael W. Simon, "Rogue State Response to BMD: The Regional Context," in *Defense & Security Analysis*, Vol. 18, No. 3, 2002, pp. 271-292; Palmore, Julian, and Francoise Melese, "A Game Theory View of Preventive Defense Against Ballistic Missile Attack," *Defense & Security Analysis* 17, no. 2 (August 2001); Theodore A. Postol, "Lessons of the Gulf War Experience with Patriot," *International Security*, Vol. 16, No. 3 (Winter, 1991-1992), pp. 119-171.

²¹ Relations between the two states during this period existed loosely in general deterrence conditions; that is, marked predominantly by peacetime conditions where the threat of war has not been placed in jeopardy by threatening behavior by one side. Traditional views describe the sub-conflict period between two antagonists as either general deterrence or an escalated situation of acute crisis (immediate deterrence) where war is possible if not intended (Huth and Russett, 1993); pages 61-73.

²² Pages 372-3.

interactions between two states in this type of interstate relationship. There also was not much attention paid to positive, cooperative interaction that could happen even between two otherwise adversarial parties under general deterrence conditions. As described, general deterrence was lacking somewhat as a theoretic frame for exploring a more detailed, behavioral approach to the Japan-North Korea case and the deterrent effects of Japan's BMD over time. According to Stephen Quackenbush in his recent book on general deterrence, "formal theories of general deterrence have never been subjected to direct empirical testing" (Quackenbush, *Understanding General Deterrence: Theory and Application*, 2011).²³ But he, too, was very constrained in his approach to general deterrence and the type and level of empirical analysis conducted. For example, he used only single, annual data entries for observing events, and these events were limited to binary outcome decisions by states to either attack or restrain; he did not consider the Japan-North Korea case.²⁴ Greater fidelity was needed within general deterrence. This was provided in the dissertation, in part, by using empirical monthly data summaries, an intensity weighting scale for behavioral interaction between states, and "stretching" general deterrence to include both cooperative and conflictual behavior.

Complicating the literature on general deterrence is the common creation of a theoretic bridge between general deterrence and extended deterrence. Extended deterrence refers to a three-way situation in which a state power, like the U.S., threatens retaliation upon an adversary who would attack an ally of the state threatening the retaliation (Huth P. K., 1988).²⁵ Cases of extended deterrence—like the provision of security guarantees provided Japan by the U.S. through extended deterrence—usually

²³ Page 41.

²⁴ Pages 4 and 51-5.

²⁵ Pages 1 and 15-6.

refer to cases of deterring conflict and threats of nuclear retaliation. Many suggest effective extended deterrence maintains a stable, general deterrence environment. However, North Korean provocative and coercive behavior, which occurs under general deterrence conditions but has included many things (i.e., ballistic missile tests, development of nuclear weapons, tests of nuclear devices, and violence and loss of life), is not deterred or prevented by the overwhelming power that is threatened via extended deterrence. This tension creates false theoretic expectations of general and extended deterrence as well as “gray areas” or gaps for policymakers. For example, Sugio Takahashi pointed out that U.S. extended deterrence commitments would not trigger U.S. retaliation of North Korean “cheap-shot strike” missile raids in small numbers (1-2 missiles or more) conducted upon Japan (Takahashi, *Ballistic Missile Defense in Japan: Deterrence and Military Transformation*, 2012).²⁶ Such sub-conflict behavior by North Korea is but one possible example of North Korean coercion toward Japan placing the onus for the defense—and deterrence—of such behavior upon Japan. Since North Korea’s ballistic missiles provide the threatening foundation for its coercion strategy with regional actors, Japan’s BMD—as a check upon that source of power—play an instrumental role in Japan’s deterrence strategy toward North Korea.

Subsequent Chapters

The dissertation research was oriented around the central question of whether Japan’s BMD deterred North Korea under general deterrence conditions. Unpacking the Japan-North Korea relationship, and the specific question dealing with the role of Japan’s BMD in deterrence, put a spotlight on the troubling international security and theoretic issues described in the preceding paragraphs. The dissertation, therefore, is organized in

²⁶ Page 22.

the following manner: Chapter Two: History sets the stage for analysis of the deterrence effects of Japan's BMD by considering how the historical interaction between the two actors informs their modern security challenge; Chapter Three: Literature Review, lays the groundwork for understanding deterrence, how missile defenses might contribute—or undermine—deterrence, and identifying core factors of an adversary needed to aid in deterrence strategies; Chapter Four: Research Design, developed the details of how to pursue researching the question and strengthening the confidence of the results; Chapter Five: Strategic Profile – Part I, builds upon the information found in the literature review for identifying core factors that matter in adversary decision-making and explores the first two of three major sections including North Korea's identity and cultural factors, followed by KJI's personal factors; Chapter Six: Strategic Profile – Part II, looks at the third major section of North Korea's core factors—environmental factors—and breaks these into various internal environmental factors, such as economic and military elements, and external environmental factors, such as diplomacy, trade, and relations with other actors; Chapter Seven: Quantitative Analysis, provides statistical analysis using empirical data for the entire 22-year period being examined and incorporates qualitative data from the preceding chapters to aid analysis; and, Chapter Eight: Conclusions, summarizes the research and analysis and its contributions to the literature, and offers closing views for the future of Japan-North Korea relations and Japan's emerging threat—China. Each of these components was an essential piece to the research and is introduced below, beginning with historical background.

Chapter Two: History

Chapter Two: History provides essential background to the lengthy political relationship between Japan and North Korea. The more recent post-Cold War dynamics should be viewed in context of this long historical relationship, leading to the current deterrence challenge. This chapter shows that cooperative, positive interaction has occurred in their past as well as negative, conflictual interaction. This range of interaction in the research provided early indications of what would need to be some rethinking on general deterrence in Chapter Seven: Quantitative Analysis. The dataset and measurement criteria for Japan-North Korea behavioral interaction used in Chapter Seven relied upon a wide scale of cooperative and conflictual interaction, contrary to the traditional view of general deterrence, but much closer to the realities of the historical relationship. Chapter Two also described briefly Japan's imperial past and some of the connections with the people of Korea. Beyond military occupation of the territory, Japanese imperialism affected Korean culture, law, government, education, and involved abuses of the people that affected their social and national psyche. Together, a deep and abiding distrust of Japan developed that resonates among Koreans on both sides of the border to this day and impacts both cooperative and conflictual interaction in their broad political relationship.

This chapter also captures the divide of the peninsula and the beginnings of the North Korean state led by its anti-Japanese fighter, Kim Il-Sung. Connections to Soviet and Chinese communism aided the development of North Korea and the outcome of the Korean War in the 1950s. The breakup of the Soviet Union—and loss of political and financial support—around 1990 came in a period of North Korean decline. Increasingly isolated, North Korea turned to a strategy of developing its own nuclear weapons

capability to thwart would-be invaders and regime-changers (e.g., the U.S.) and a coercive strategy aimed primarily at regional actors to maintain if not improve North Korea's regional position. The regional changes, and the U.S. preoccupation in the Middle East, contributed to Japan's political evolution from defeated and disarmed World War II antagonist, to pacifist ally of the U.S, to its more recent rise in autonomy and military capabilities including choices for its BMD program. These themes demonstrate that the relationship between Japan and North Korea today is a continuation of the past in many ways. This relationship includes cooperative and conflictual interactions, suggesting a need to better understand one another—a need addressed, in part, in Chapters Five and Six. These themes also describe the sources of their mutual distrust, North Korean needs for strengthening its political sovereignty, and the North Korean value of ballistic missiles. This background, then, set the scene for Japan's BMD program to emerge as an integral part of its deterrence relationship with North Korea and the theoretic situation to be explored in the next chapter.

Chapter Three: Literature Review

Chapter Three: Literature Review is an important feature of the dissertation. It begins by describing the evolution of deterrence thought and how deterrence has experienced several “waves” of theoretic development. It was expected that since the Japan-North Korea relationship over the past 20+ years being researched in the dissertation was a general deterrence case, then unfolding general deterrence theory would provide a clear framework to aid in understanding the Japan-North Korea deterrence relationship and analytic ways to research the problem. But while some ideas were found, the dissertation research intended to delve into behavioral interaction that

could be counted, measured, and analyzed statistically to consider whether BMD affected *change* in North Korean behavior indicative of deterrence being strengthened or undermined. Even current writings on general deterrence were not of much utility. This chapter also mapped the evolution of deterrence in context of changes in technology and military capabilities, including nuclear weapons, ballistic missiles, and missile defenses. Doing so helped understand how the U.S. missile defense program evolved in primary phases and informed identification of the four Japanese BMD periods address in Chapter Seven: Quantitative Analysis. The nature of deterrence literature changed dramatically with the end of the Cold War.²⁷ This period was marked by the rise of regional actors—including North Korea. One significant highlight was the regional conflict between a U.S.-led coalition and Iraq in 1991 involving use of ballistic missiles and missile defenses, thus reshaping the missile defense-deterrence reference point from arguments solely about superpower balance of power to utility of missile defenses in conflict.

In addition to changes in weapons and warfare, scholars (and policymakers) once free from the dominance in deterrence theory of the bipolar Cold War U.S.-Soviet nuclear rivalry, recognized the need to provide greater fidelity in understanding of an adversary, in recognition that deterrence had failed in some unexpected cases and that individuals making national security decisions were informed in their decision-making by emotions and other psychological factors not considered important by most who used the simple, rational actor model of the Cold War era. Through this literature review, the ingredients and organization of a deterrence-related adversary strategic profile emerged

²⁷ See Stephen Cimbala's study in 1989 on the debate of offenses versus defenses and implications for deterrence. Like many other authors in this period no attention was provided to the contributions or distractions of missile defenses to deterrence or to the impact of defenses in Asia, or implications for individual states such as Japan (Cimbala, *Strategic Impasse: Offense, Defense, and Deterrence Theory and Practice*, 1989).

and was developed in Chapter Five: Strategic Profile – Part I and Chapter Six: Strategic Profile – Part II, which were applied to offer insights in Chapter Seven: Quantitative Analysis. These linkages are described further in Chapter Four: Research Design.

Chapter Four: Research Design

Chapter Four: Research Design showed how the research was ordered to try to isolate the Japan-North Korea case and the research question under consideration. As outlined in the design, this involved a brief review of the Japan-North Korea relationship, including periods of Japanese interactions with peoples and kingdoms of the Korean peninsula spanning over two millennia. This was done to provide context for the dissertation's research and analysis of the more recent period since the end of the Cold War (found in Chapter Two: History). It also involved a thorough theoretic examination of deterrence, missile defenses, and the interaction of the two (see Chapter Three: Literature Review).

In order to answer the question of whether deterrence “worked” on North Korea requires measuring change in the object of the deterrence strategy. In the case of the dissertation—the subtleties of general deterrence conditions, having relatively modest relational changes in the sub-conflict, even sub-crisis, situation between Japan and North Korea—a measurable object was the behavior of North Korea toward Japan. This was in keeping with Chapter Three: Literature Review which indicated deterrence was to be aimed at influencing a state leadership as that state's decision-maker, but that the outcomes of their perceptions, thinking, and choices would be reflected primarily in their state-level behavior. This type of behavior was captured using media reports of empirical events and technologies for converting those reports into measurable data between Japan

and North Korea. This technique allowed four basic criteria for deterrence effectiveness to be identified that reflected the behavioral measures captured from the data, proving to be an effective methodology. The results yielded some statistical findings indicating Japan's BMD strengthened deterrence *and* undermined deterrence of North Korean behavior in different BMD periods and in different ways. Qualitative data from the strategic profile in Chapters Five and Six were then considered to help interpret the statistical findings.

Chapters Five and Six: Strategic Profile

Contemporary deterrence literature strongly recommends a deeper understanding of the one to be deterred and, to the degree possible, tailor your deterrence strategy the things that matter to them in their decision-making. One approach to such an understanding is through development of an adversary strategic profile, a qualitative research endeavor that explores national, personal, and environmental factors important to deterrence. The strategic profile was developed based upon the insights gleaned in Chapter Three: Literature Review. Non-essential material dealing on North Korea was not included. What remains is a detailed assembly of deterrence-related qualitative data that, when properly ordered into its various factors and described, provides a broad understanding of North Korea, its leaders, and their personal and national values. Thus, one's understanding of an adversary is not only internally consistent, but can be used more effectively in helping to better understand the statistical results in Chapter Seven: Quantitative Analysis. Research of the North Korea leadership indicates a pragmatic and rational regime that ascribed to a value system consistent with its national history, culture, and ideology. Unfortunately, the North Korean value system used by its leaders

sees its people and neighbors instrumentally for the benefit of the regime and state. Central to this view is securing state sovereignty and protection from intervention and occupation—enduring problems of the past, including Japan’s imperial rule over Korea. The military forces, particularly ballistic missiles and WMD, came to play a dominant role. KJI responded to environmental influences—at least in his relations with Japan—including the deterring effect of Japan’s BMD. The qualitative data in the strategic profile provide many of the sources of KJI’s decisions and behavioral actions of North Korea toward Japan.

A consequence of theoretic review of literature in Chapter Three, the strategic profile organized the data on North Korea into three main categories: (1) North Korea’s national identity and cultural values; (2) the personal factors of Kim Jong-Il (KJI); and, (3) internal and external environmental factors. Because of the length of the material, these three categories were divided into two separate chapters: Chapter Five: Strategic Profile – Part I includes the first (identity and culture) and second (KJI) categories; Chapter Six: Strategic Profile – Part II includes the environmental factors. Chapter Five provides historical insights to North Korean national values and how those values might inform the security-related beliefs of North Korea’s top leaders. Chapter Five also provides the cognitive and psychological factors that informed KJI in the 22-year period explored in the dissertation. Chapter Six examines the many internal and external environmental factors of the North Korean state and the North Korean behavior that may have resulted from KJI’s interpretation of those factors.

Importantly, these three categories do not simply describe division of material. Rather, the categories are also related one with another: KJI, as the leader and decision-

maker in North Korea, made decisions, in part, based upon his own style, worldview, and psychological makeup (KJI's personal factors); however, KJI was also a reflection of the people, and the face of North Korea's culture, history, and national values (identity and culture); and, KJI was the one who ultimately interpreted the internal and external environment and changes within environmental factors. For example, a North Korean strategy that includes punishment of Japan for past grievances, such as terrorizing Japan with ballistic missiles, exploiting Japanese citizens through capture and military utility, or making demands for reparations, is also a reflection of national values and satisfies emotive needs of North Korean people.²⁸ Japan's BMD, however, was a challenge to North Korea and KJI personally. As interpreter of changes in the environment, KJI led the North Korean responses to Japan's BMD. These key relationships among the North Korean factors, either separately or in combination, are reflected in North Korean behavior resulting from the decisions made by the North Korean leader. And it is this behavior that is captured as North Korean directional events toward Japan in the dataset and used in Chapter Seven: Quantitative Analysis.

Chapter Seven: Quantitative Analysis

The preceding chapters lead to Chapter Seven: Quantitative Analysis which provided the statistical analysis of North Korean behavior toward Japan over a 22-year period. When North Korea lost its Soviet sponsorship when it dissolved at the conclusion of the Cold War, North Korea's new security reality shaped its strategy trajectory for the period since then. For this reason, and because statistical data were available, the dataset

²⁸ Reportedly, the North Koreans stipulated the need for a minimum of \$10 billion, and possibly as much as \$20 billion from Japan. For its part, Japan may be willing to pay \$5-10 billion (Manyin, 2002); page 3. By comparison, the 1965 deal between Japan and South Korea was the equivalent of \$3.4 billion to \$20 billion, depending on just how one applies various calculations for inflations, etc. (page 5).

started in 1990. The dataset was acquired from Dr. Doug Bond and VRA (Virtual Research Associates) and included monthly data of state-level events for the period January, 1990 through December, 2011. These data indicated: events that were directional (for example, data were tagged as coming from North Korea and oriented toward Japan); whether the events were cooperative/positive or conflictual/negative in nature; the weight, or intensity of each cooperative-conflictual event using an event scale provided by Joshua Goldstein; and, a total count of directional events each month for each country. Thus both cooperative and conflictual North Korean behavior toward Japan could be measured as either increasing or decreasing over time. North Korean cooperative and conflictual behaviors toward Japan were the two dependent variables assessed in the statistical analysis. Starting in 1990 not only captured North Korea's behavior after the Cold War era when it experienced greater independence, it also allowed for a substantial period of time before Japan began its BMD program and, therefore, an adjoining period absent BMD programmatic decisions in which statistical comparison can be made.

The literature review of Chapter Three helped identify key BMD periods to analyze, stemming from the similarities of the Japanese and U.S. missile defense systems in terms of overall program development. These periods were then devised as key independent variables used in the statistical analyses. Other control variables were also developed to isolate the statistical effects of Japan's BMD. These control variables included: the cooperative and conflictual behavior of the U.S., China, and South Korea toward North Korea, taken from the dataset; the periods of rapprochement between Japan and North Korea; and, political parties in the U.S., South Korea, and Japan. Various

regression models were employed using these variables which analyzed Japan's BMD. Four criteria for deterrence effectiveness were created. These criteria reflected the four possible outcomes of change in North Korean behavior toward Japan (increase or decrease in cooperative behavior; increase or decrease in conflictual behavior)—that is, North Korean behavioral change was conceived as either strengthening or undermining deterrence in general deterrence conditions.

Though a few differences were noted, the qualitative data, mainly from Chapters Five and Six, generally affirmed the statistical analysis. For example, the statistical analysis suggested Japan's BMD in the TD-2 period (early 2009 to the end of 2011) correlated to reduction of conflictual North Korean behavior toward Japan, an effect also suggested by the qualitative data including changes in North Korean ballistic missile testing patterns in this time period. The findings indicated Japan's BMD was a significant factor in North Korean behavior toward Japan. This is not a surprise, given that BMD can undermine the primary source of North Korea's coercion strategy—its ballistic missiles. What was interesting was how BMD affected North Korean behavior: it strengthened deterrence in two periods, undermined deterrence in one period, and did not matter statistically in one period; and, the two periods where deterrence was strengthened were reflected in two different ways (increased cooperative, positive behavior toward Japan in one period; decreased conflictual, negative behavior toward Japan in another period). This shows the value of the models and the deterrence effectiveness criteria created for applying these data to general deterrence situations. Other important findings were the lack of impact of the U.S. in affecting either cooperative or conflictual North Korean behavior toward Japan in any of the BMD periods, and only a modest role of China.

Chapter Eight: Conclusions

In Chapter Eight: Conclusions, the preceding analyses are summarized and distilled further. Analysis of the four Japanese BMD periods, for example, portray evolution of Japan's BMD, but also changes in Japan's capabilities over time and Japan's increasing political commitment, and national security stake for its own defense. The results from the dissertation analysis indicate Japan's BMD did deter North Korea. The statistical analysis did not support BMD as strengthening deterrence in all four BMD periods—indeed it was not significant at all in one of the four periods. This suggests, as the missile defense-deterrence literature generally indicated, BMD can create both positive and negative deterrence effects under different circumstances. It also showed that deterrence effectiveness, as a reflection of North Korean cooperative and conflictual behavior toward Japan, is not simply a binary question—did the adversary do undesirable action X or did he refrain—as suggested by a DoD concept (U.S. Department of Defense, 2006). Nor is deterrence effectiveness simply a question of whether the adversary's conflictual behavior moderated. Rather, it can include increases or decreases in cooperative behavior in addition to decreases in conflictual behavior. This addressed one of the thornier theoretic and analytic gaps in deterrence: whether deterrence, as an influence activity, can be evaluated in any way as to the success or positive impact of its activities or, as Handberg argues, can only be “measured by its failure” (Handberg, 2002).²⁹ Further, the period preceding Japan's BMD program (1990-98) indicated relatively low intensities of interaction between Japan and North Korea, suggesting the North Korean priority was on developing nuclear weapons first, and then employing its coercion strategy further. Chapter Eight also provides a brief review of many of the

²⁹ Page 89.

missile defense-deterrence theoretic arguments through the lens of the Japan-North Korea case and the analyses provided in the mixed-methods approach. This review indicated that many of the arguments were germane to the Japan-North Korea case.

Chapter Eight also revisits some of the deterrence-related IR theoretic challenges or gaps, suggesting the dissertation played a role in narrowing those gaps somewhat. For example, the challenge of deterring a regional “rogue” adversary was taken from a completely different perspective. Rather than taking a U.S.-centric position, the dissertation approach explored deterrence from Japan’s position, with its BMD as the focus, in day-to-day conditions. The pervasive deterrence theoretic element of threat of military retaliation was not of significant importance in this case. Secondly, the dissertation provided a strategic profile of North Korea that incorporated and consolidated the many ideas in the past 25 years on improving one’s understanding of an adversary, not only to help explain his behavior, but to help deter and influence that behavior in ways that include both cooperative and conflictual interactions. Third, empirical analyses of general deterrence emphasized adversary decisions to go to war and lacked granularity of adversary behavior over time. Empirical analyses of general deterrence also lacked granularity in the role of BMD over time to contribute to general deterrence. The dissertation addressed both of these through use of a mixed-method approach. From this approach, four new criteria of assessing deterrence effectiveness in general deterrence emerged, providing a repeatable methodology for assessment of general deterrence over time. Having researched the Japan-North Korea deterrence relationship, Chapter Eight also provides ideas for Japanese security in light of the key

regional dynamics of uncertainty over North Korea's future, a rising China, and increasing Japanese autonomy. Japan's BMD will play a central role in the future.

Conclusions

Japan has become more assertive and confident in regional affairs, a reflection of greater autonomy for its own interests and security (Takesada, 2001).³⁰ This autonomy, or greater freedom of action, included such things as the sinking of a North Korean spy ship in 2001 (Chanlett-Avery, *The U.S.-Japan Alliance*, 2011),³¹ pursuit of a UNSC permanent seat, and a space program that could, with its BMD technological capacity, provide Japan the option of converting its missiles into offensive ballistic missiles. For Japan, rising autonomy may not be a choice as it projects into the future: the fate of the North Korean regime, its weapons of mass destruction, even Korean unification, are also serious concerns for Japan; disputes with China over territory rich in energy resources adds significant risks to Japan; and, long-term projections indicating Japanese and U.S. overall decline in the wake of the rise of China and India suggest the need for greater, not less, Japanese autonomy in the out-years (National Intelligence Council, 2012). Japan's strategic choice of BMD provides a hedge against such weighty uncertainties. Understanding the role of Japan's BMD to deter North Korean behavior contributes to the knowledge of North Korea and its behavior, missile defense-deterrence literature, and the application of a mixed-methods approach to deterrence effectiveness in general deterrence conditions over time employing empirical data. This could also aid in exploring the future of Japan's BMD in light of other regional challenges not too distant

³⁰ See the section entitled, "CHINA'S AND NORTH KOREA'S OPPOSITION."

³¹ Page 7.

on the time horizon—including deterring Chinese behavior—and the possible effects of other BMD programs being considered in other regions of the world.³²

³² The U.S. sees ballistic missile proliferation worsening (Missile Defense Agency, 2012); see the first paragraph; NATO does as well (North Atlantic Treaty Organization, 2012); see Section I, paragraph 4.

CHAPTER TWO: HISTORY

Japan's missile defense is an essential instrument of Japanese power and influence. Further, this recent development must be considered in light of its increasing independence and in the historical context of regional and global international relations. Below is a brief review of the highlights of regional events and considerations intended to acknowledge some of the larger and recurring issues in Northeast Asia security as context for the dissertation topic.³³

Regional History

Imperialism

In the thread of Northeast Asia security, one of the more significant factors that emerged in modern history is the impact of imperialism within broader Asia. According to Dower, imperialism "defined" 20th Century Asia, and Japan's imperial exploits followed that of Britain, France, the Netherlands, and the United States (Dower, 1999).³⁴ For example, from 1839-42, Britain battled with China in the Opium War gaining special privileges (which expanded later to the U.S. and France) and control over key Chinese ports along its coast including Hong Kong. In 1854, the U.S. forced Japan to open trade relations (Bueno de Mesquita, *Principles of International Politics: People's Power, Preferences, and Perceptions*, 2003).³⁵ Japan, likewise, pursued its own imperial path including the colonization of Korea.

Japan's Imperial Past.

³³ In this chapter, emphasis is placed upon the historical role of Japan and its deterrence capabilities and approach. More details concerning the Japan-North Korea relationship is provided in the next section of this chapter, and considerably more on North Korea generally in Chapters Five and Six.

³⁴ Page 470.

³⁵ Page 37.

Japan's imperial conquest was expansive and impacted many regions.³⁶ The empire covered, often by military force and war, much of Northeast Asia, including Korea, the islands of Hokkaido, Okinawa, and Sakhalin; Southeast Asia, including Taiwan, Micronesia, Thailand, the Philippines, Malaya, and Burma; and parts of Manchuria, eastern China. China was large but its military was no match for Japan's organized, trained, and modernly equipped forces (Masselos, 2010).³⁷ However, its encroachment upon its subjects went beyond material exploitation to attempts at cultural transformation. One of the most profound areas of impact was Korea—an historical period that influence Japan-North Korea relations to this day.

The two key slogans for Japan's imperial period, also known as the Meiji Restoration, lasting from 1868-1945, were: “a rich country, strong army;” and, “Japanese spirit, Western techniques” (Masselos, 2010).³⁸ The former connected the need for economic cooperation with Japan's colonies, if not outright theft of their resources and forcible use of their people for labor, to growth of Japan's military forces. The latter connected Japan's unique position as an Asian imperialist power with selective practices observed by Western powers in Asia.

Part of the impact of Japan's imperialism was its smothering effect politically, culturally, and militarily. In 1875-6, Japan forced the Korean government to sign the Kanghwa Treaty, the beginning of the end of Korean sovereignty, through “gunboat diplomacy,” a type of action Japan copied from the United States. As Japanese imperialism over Korea expanded, Japan justified its actions, including extensive

³⁶ Some rationalized Japan's imperial conquests as merely natural extensions of the “flow of civilization,” an idea held by other imperial powers (Dudden, 2006); page 142.

³⁷ Pages 194-5 and 200

³⁸ Page 196.

assimilation practices, by “protecting” Korea from China, teaching Korea, and serving as Korea’s cultural “doctor.” Over time, Japan replaced Korea’s cultural and political institutions, their religious symbols, language, formal dress attire, food, and education (Caprio, 2009).³⁹ Japanese troops assassinated the Korean queen in Seoul in 1897 (Shin, Park, & Yang, *Rethinking Historical Injustice and Reconciliation in Northeast Asia: The Korean Experience*, 2007).⁴⁰

One of Japan’s greatest grievances during this military buildup was the forcible taking of thousands of young women, including Koreans, as “comfort women” to provide sex to Japan’s military personnel (Dower, 1999).⁴¹ Many of these women were raped in proximity to the battlefield or brought to military quarters and kept as sex slaves. A reasonable total number of such women is 50,000 (higher estimates go to 400,000). The number of just Korean women is in the tens of thousands, all facilitated by Japan’s colonial presence and force (Soh, 2008).⁴²

Japan also forced military mobilization of Korean and Formosan subjects during its preparations for World War II (WWII). Hundreds of thousands of Koreans were brought to Japan during WWII, not only for “comfort women,” but to serve in Japan’s armed forces and as a labor pool for Japan’s industries. By war’s end over two million stateless Koreans resided in Japan, though this number fell significantly as many returned to Korea after war. It took decades to overcome loss of rights, insurance, and veterans’ pensions. Racial friction with Japan’s “expatriate community” continues (Ryang,

³⁹ Pages 14, 54.

⁴⁰ In Gavan McCormack’s chapter, “Difficult Neighbors: Japan and North Korea.” Page 154.

⁴¹ Page 465.

⁴² Pages 23-4 and 104.

Koreans in Japan: Critical Voices from the Margin, 2000).⁴³ Japan's reach included takeover of Korea's judiciary system, police, and prison system, and included extensive use of flogging prisoners (Dudden, 2006).⁴⁴ Japan's imperialist practices also included censorship and use of locals, including artists, for its rampant propaganda measures (Mayo & Rimer, 2001).⁴⁵ One of the most notorious and violent events of Japan's imperial action to control China (ultimately proving unsuccessful) was its 1937 "Rape of Nanjing" where Japanese soldiers captured the capital of rebel Chiang Kai-shek and killed 200,000 people in a large-scale atrocity (Masselos, 2010).⁴⁶

World War II and its Aftermath

Imperialism intertwined the economic, political, and military forces of East and West, ultimately leading to World War II and the end of the imperial era in Asia. As the war ended, new realities, including the rising Communist threat and the Cold War, emerged concerning regional security, resulting in long-term U.S. commitment in the region and the Korean War. A few historical events are highlighted below along with post-Cold War issues.

United States.

U.S. commitment to South Korea included leadership in the Korean War and placement of nuclear weapons on South Korean soil (later removed) in response to threats it perceived from Communist nations. Following the Cold War, the U.S. redirected its regional commitments as regional threats, such as Iraq, dominated U.S. attention. This included addressing the rising ballistic missile threat by North Korea and

⁴³ Pages 3-7 and 206.

⁴⁴ Pages 115-6.

⁴⁵ Page 20.

⁴⁶ Page 213. Others use the name Nanking for the city Nanjing.

others. However, this has not been a smooth security transition as the U.S. sought to address ballistic missile threats, rising proliferation and maintain regional alliances. For example, Burns argued the U.S. national missile defense system was focused on defending against North Korean and Iranian missile threats and, therefore, dissuading them from ballistic missile proliferation. However, this strategy failed with North Korea as it continued to pursue a nuclear weapons capability and missile technology did not abate, possibly fearing regime change. North Korean nuclear and missile tests ensued, leading to Japanese choices on BMD (Burns, 2010).⁴⁷ In other words, Japan was most afraid of aggressive U.S. actions initiated toward North Korea in its new post-Cold War power projection role that could embroil Japan as a potential target of North Korean ballistic missiles. However, in recent years the trend has been toward allied uncertainty over U.S. credibility.⁴⁸

Russia.

Russia's role in Northeast Asia has been less prominent especially since the Cold War ended. According to Victor Cha, Russia has the least amount of influence over North Korea of all regional actors, sharing a common border of only 12 miles. At one point, Russia represented North Korea's top trading partner. A former Communist sponsor of

⁴⁷ Pages 95-6. To avoid the same outcome as North Korea, U.S. missile defense strategy in Europe, therefore, would need to present the U.S., through NATO, as a "bigger" defensive influence over Iran's emerging nuclear and ballistic missile threats.

⁴⁸ For example, the new NATO Strategic Concept may have been viewed by Japan "as another example of the American retreat from its global commitments." Japan was following NATO deterrence development closely apparently fearful that perceptions of U.S. weakness or retreat in Europe might suggest Japan take a greater role for its own security. The IFPA report also notes that President Bush and his National Security Advisor, Brent Scowcroft, both affirmed U.S. nuclear weapons use was not an acceptable policy response to Iraqi use of WMD (Davis, Pfaltzgraff, Perry, & Schoff, 2009); page 18. This, too, may have reduced U.S. credibility both in the eyes of North Korea and Japan, incentivizing Japan to develop increased defense and deterrence capabilities of its own. See page 15 and footnote 9. Further, according to Swaine, et al, Japan's pursuit of BMD has implications for the "reliability of U.S. deterrence" and the U.S.-Japan alliance, especially since Japan strongly desires a more autonomous role (Swaine, Swanger, & Kawakami, 2001); pages xiv-xv and xvii.

North Korea, economic aid from Russia (then the Soviet Union) ended around 1987.⁴⁹ As the Cold War ended, the Soviet Union retracted its security guarantees over North Korea, all but ceased trade and economic aid, and in 1990 normalized relations with South Korea and began economic ties with the ROK (Kawashima, 2005).⁵⁰ North Korean leader, Kim Jong-Il (KJI) viewed this as a breach of trust and, in his discussions with Soviet Foreign Minister Eduard Shevardnadze in Pyongyang, threatened to develop his own nuclear weapons in lieu of an alliance-based deterrent from Moscow. Eleven years later KJI traveled to Moscow and smoothed over relations with President Putin, reportedly turning back to the idea of trust and sincerity over diplomacy and partnerships between the two countries, stating “I don’t want to be a ‘partner.’ You don’t say ‘partner’ with friends” (Cha V. , 2012).⁵¹ Today, Russia holds nearly \$9 billion of North Korea’s total \$12.5 billion debt load (Cha V. , 2012).⁵² Relations with North Korea center on the prospects of railway connections and a gas pipeline from Russia across the Korean Peninsula (Cha V. , 2012).⁵³

China.

While China did not develop industrially or technologically as fast as the Soviet Union did following WWII, China had rising interests in the region. With the collapse of imperialist strongholds, and having fought its own civil war, China was keen to avoid any use of the Korean Peninsula as a path to invasion again as Japan had done. Having a long border with North Korea, and much of its industrial capacity centered near that border, China was willing to pay significant costs to prevent adversaries from positioning

⁴⁹ Pages 350 and 355.

⁵⁰ Page 77.

⁵¹ Pages 354 and 361-2.

⁵² Page 117.

⁵³ Page 359.

themselves on its border in North Korea. For this reason, it was willing to embroil itself in the Korean War. As evidenced by its normalization of relations with Japan and South Korea, China is interested in balancing its support to North Korea with stable relations with the U.S. and Japan, though it has used its increasing regional and international clout to pressure the U.S. and others (Clough, 1976).⁵⁴ Today, China provides North Korea aid to try to maintain a semblance of stability. However, China's primary motivation to continue a large-scale economic predator-like "extraction" policy of North Korean natural resources and minerals to facilitate Chinese development. One study places the value of North Korean mineral deposits—which include iron, copper, coal, limestone, molybdenum, and magnesite—as 140 times its GDP (Cha V. , 2012).⁵⁵

Republic of Korea.

The Republic of Korea (ROK), also named South Korea, rose from the events of WWII weak, ideologically separate from the North, and fraught with internal instability. Democracy and economic strength did not emerge for nearly three decades. More recently, ROK has emerged strong and confident, reflecting a greater sense of nationalism as it considers its own security interests (Perry & Yoshihara, *The U.S.-Japan Alliance: Preparing for Korean Reconciliation & Beyond*, 2003).⁵⁶ For example, under President Kim Dae-Jung, South Korea pursued a "sunshine policy" with North Korea in

⁵⁴ Pages 41-4. China normalized relations with South Korea in 1992 which, though the Korean War was not settled formally, opened the door for both North and South Korean UN membership (Kawashima, 2005); page 77. China is also opposed to Japan's BMD system. Opposition includes the following arguments: Japan will be able to protect Taiwan; it weakens China's nuclear deterrent force; it reduces Chinese "psychological leverage" on Japan in crisis; will lead to a destabilizing regional arms race; will help contain China; will spur China to create new BMD countermeasures and adopt a nuclear warfighting strategy; and, it undermines arms control efforts (Swaine, Swanger, & Kawakami, 2001); pages 79-80.

⁵⁵ Pages 334-9.

⁵⁶ Page 178.

the 1990s, seeking to moderate its behavior (Hagstrom & Soderberg, North Korea Policy: Japan and the Great Powers, 2006).⁵⁷

The threat from North Korea, including vast numbers of ballistic missiles, however, remains a key security concern for South Korea. Victor Cha, for example, suggests in wartime the ROK could be faced with a threat of 600 Scud missiles attacking various targets in the South with chemical weapons, including airports, train stations, and sea ports to deny civilians escape routes from Seoul and other metro areas (Cha V. , 2012).⁵⁸ South Korean strategy has been to advance its BMD capabilities and, unlike Japan, deploy and strengthen its offensive ballistic missile force capable of reaching most, if not all, targets in North Korea. Proximity of Seoul, the ROK capital, to North Korean territory and threatening missiles places great stress upon the ROK government and pursuit of technical remedies to defend itself.⁵⁹ Today ROK is in a similar situation to Japan in some respects, such as maintenance of an alliance with the United States.

⁵⁷ Page 21.

⁵⁸ Page 212.

⁵⁹ For example, according to November 2012 press reporting, South Korea's planned BMD system, upon expansion in the near future, will be able to detect North Korean ballistic missile launches within 100 seconds using the South's Green Pine early warning radar (acquired from Israel) or its Aegis ship radar capabilities. If South Korea was provided information on North Korean ballistic missile launches from U.S. early warning radar satellites, this time would be reduced to approximately 40 seconds after launch (Korean Plan Sparks Speculation about US Missile Defense, 2012). See the second news article in this daily report. Theodore Postol argues that while 60 seconds may not seem a great deal of time to passive observers, it could be the difference in ROK decision-making, response, and successful engagement of hostile missiles, particularly since targets in South Korea could be struck by North Korean ballistic missiles in much shorter times than targets in Japan given the proximity of priority targets immediately to the South on the peninsula, such as the heavily-populated South Korean capital of Seoul. Postol further suggests there is a technical solution for shooting down ballistic missiles in their boost phase from regional actors, including North Korea, by placing interceptors on ships or converted Trident submarines and stationing them close to North Korea. Such a capability would be less costly than space-based systems but would, nevertheless, face regional opposition to such deployments (Dudley, 2003). Page 56.

Japan normalized relations with ROK in 1965 and pledged \$500 million in colonial period restitution payments over a 10-year period (Kawashima, 2005).⁶⁰ Because of the dual alliances the U.S. has with Japan and ROK, Japan seeks to maintain favorable relations with ROK (Rozman, Togo, & Ferguson, Japanese Strategic Thought toward Asia, 2007).⁶¹ Without question a complex relationship, Japan's BMD activities could be viewed as an important avenue for military-related information or training exchanges between Japan and ROK as both face ballistic missile threats from North Korea.

North Korea.

Ironically, it was North Korea that emerged from WWII as "the most industrialized and urbanized Asian country" stemming in large part to Japan's industrial foundations laid in its occupation of Korea prior to the war. When the war ended, the vast majority of mining, heavy industry, and electricity capacity lie in the North. Liberated by the U.S. and USSR, Korea split between camps loyal to each. As a leader of the anti-Japanese guerilla campaign, Kim Il-Sung became the leader of the North, having aligned himself with the Soviet Union. In the South, many of those who collaborated with Japan were utilized in the U.S. occupation and administration of the South, a fact not lost on North Korean propagandists. Many of the advantages disappeared following the Korean War and the toll taken on North Korea. Soviet infusion of funding and technology helped keep North Korea ahead of the South until the 1970s when technology and trade began to pass Communist trading partners. By the 1980s South Korean modernization took hold

⁶⁰ Page 76. Much higher estimates suggest total payments could reach \$12 billion (Shin, Park, & Yang, 2007); in Gavan McCormack's chapter, "Difficult Neighbors: Japan and North Korea." Page 168.

⁶¹ Page 6.

and key indicators reversed (Cha V. , 2012).⁶² By the 1990s military capabilities, too, began serious decline in North Korea.

North Korea emerged in the early post-Cold War period facing near-complete isolation, unlike South Korea with normalized relations with the Soviet Union in 1990 and China in 1992. North Korea sought to avoid such isolation and rebalance itself by seeking to establish ties with the U.S. and Japan. Mutual mistrust among the parties involved left North Korea in a political stalemate (Rozman, Togo, & Ferguson, Japanese Strategic Thought toward Asia, 2007).⁶³

Japan.

Japan, too, was looking ahead to its security interests, even before the end of the war. For example, as WWII progressed, Japan began negotiations with the U.S. for a peace agreement, instead of unconditional surrender, in which Japan would retain its imperial control over Korea and Taiwan. Its strategy was not only to retain its external sources of power, but to convince the U.S. and the West that a strong Japan was essential to thwarting Soviet and Communist expansion, a worry shared in Washington. The Soviets objected to such negotiations and this strategy proved futile in the end (Chol, 2004).⁶⁴ Like others, Japan suffered significant losses by war's end including: 2.7 million dead (3-4% of Japan's wartime population); millions more wounded or injured; loss of 65% of Tokyo's homes; and, destruction of a third of the national wealth (Dower,

⁶² Pages 22-5 and 36-7.

⁶³ Pages 16-7.

⁶⁴ Pages 83-90. Interestingly, according to Dower, part of the reason Japan did not remilitarize was to resist secret U.S. pressure during the heat of the Korean War for Japan to quickly stand up and provide a force upwards of 350,000 men to aid the war effort. Had Japan chosen to enact it, this action would have been a political disaster given recent memories of Japan's shocking wartime violence (Dower, 1999); page 548.

1999).⁶⁵ Further, after years of rethinking in the postwar period many in Japan's political circles ask, "Can Japan survive?" (Curtis, 1999).⁶⁶ It is also not surprising the worth Japan ascribes to defenses.

Ralph Clough, in his reassessment of the security situation in Northeast Asia following the conclusion of the Vietnam War, reminded readers that U.S. forces, including its tactical nuclear weapons, were placed in South Korea principally as a deterrent against Chinese, not North Korean, military intervention (Clough, 1976).⁶⁷ However, and importantly for the dissertation, he also stated, and U.S. and Japanese leaders publically declared, that U.S. forces were needed in South Korea principally because of the U.S. need to address *Japanese* security concerns. Japan has sensed insecurity stemming from Korea since the time Japan engaged in conflict with China and Russia and occupied the Korean peninsula near the turn of the 19th century. This insecurity persisted if not increased after Japan's surrender following World War II. Under those circumstances, Japan was unable to influence the regional security conditions in its favor, in part due to constitutional limitations on its use of military forces imposed by the U.S. as occupier. Japan viewed its alliance with the U.S. as designed to prevent a hostile power from threatening Japan through Korea. In other words, Japan supports South Korean defense as a way to protect its own homeland (Clough, 1976).⁶⁸ The increasing threat from North Korea later on, coupled with a heightened need

⁶⁵ Page 45.

⁶⁶ Page 235.

⁶⁷ Page 6. U.S. nuclear weapons were withdrawn later.

⁶⁸ According to Clough, however, there are other benefits for Japanese support of U.S. forces in South Korea including: protecting Japan-ROK trade and investment; military and political stability with respect to China and Russia; restraining Japanese military missions and force level creep; and, it increases the credibility of the U.S. extended deterrence guarantees, essential to Japan's own security. Pages 44-8.

domestically for greater autonomy in providing security for its own sovereignty, led Japan to pursue other avenues of “influence” including BMD capabilities.

Neighborhood Dangers

Ballistic Missiles and WMD

Proliferation of ballistic missiles by regional actors is problematic as they develop or acquire them as a new technological military tool to span great distances in which parties are often separated by oceans or great distances. The ballistic missile proliferation problem is a significant one. For example, in 1972, there were nine countries with ballistic missiles (including the U.S.). By 2006 that number had swelled to 25 states with ballistic missiles (Missile Defense Agency, 2009).⁶⁹ Further, there are now nearly 6,000 ballistic missiles in the world (not even counting those in the U.S., NATO, Russia, and China), with over 1,200 ballistic missiles fielded just since 2006 (Missile Defense Agency, 2012).⁷⁰ North Korea may have as many as 800 ballistic missiles in the field or ready to be deployed (Scobell & Sanford, *North Korea's Military Threat: Pyongyang's Conventional Forces, Weapons of Mass Destruction, and Ballistic Missiles*, 2007).⁷¹ Further, North Korea continues to be the world's leader in ballistic missile proliferation (Samson, 2010).⁷²

The Japan-North Korea relationship also lies in context of the advent and proliferation of nuclear weapons following WWII, as well as chemical and biological

⁶⁹ Supplemental charts, pages 12-13.

⁷⁰ See paragraph eight.

⁷¹ Page 114. The 1991 Gulf War placed a spotlight on the changing nature of the threat facing the U.S. and its allies in the late 20th Century. Two key components of the threat were the proliferation of ballistic missiles and the proliferation of weapons of mass destruction (WMD), but this threat was most urgent with the nexus of both as in the case of Iraq by the late 1980s (Payne, *Missile Defense in the 21st Century: Protection against Limited Threats*, 1991). See Table 1, for example, of the rising threat presented by the proliferation of ballistic missiles and WMD globally. Page 33.

⁷² Pages 11-2, 14.

weapons in the region. Of the key players in the Northeast Asia region, several, including the U.S., Russia, China, and more recently, North Korea all possess nuclear weapons though the number of weapons North Korea possess is relatively low, perhaps less than twenty. Other regional states, including Taiwan and South Korea have explored the development of nuclear weapons in the past. Further, nuclear use by the U.S. was potentially a decision factor in the Korean War, and the prospect of nuclear weapons being introduced in wartime scenarios is an ever-present danger. While Japan and U.S. territory is separated from the other regional actors by bodies of water, the proximity and potential stakes of these actors raises the risks of escalation stemming from North Korean provocation or miscalculation.⁷³

North Korea's Pattern of Provocation

For years, both during the Cold War and in the two decades since its end, North Korea has engaged in behavior, sometimes using violence, that many describe as provocative, to serve its domestic purposes or incite reactions of some kind. Kawashima characterized North Korean behavior as “destabilizing” (Kawashima, 2005).⁷⁴ The following is not a comprehensive list, but illustrative of the political and military nature of North Korean provocations, including some affecting Japan. Some examples include: (1) withdrawal from the Nuclear Non-Proliferation Treaty (NPT) and (2) cruise missile tests over the Sea of Japan (Perry & Yoshihara, *The U.S.-Japan Alliance: Preparing for*

⁷³ Paul Bernstein, John Caves, and John Reichart argue North Korean possession of nuclear weapons may not only be for extortion or coercive purposes under day-to-day, “general deterrence” conditions, but may also play a role in wartime. They suggest North Korea may use nuclear weapons early in a conflict on the peninsula, not only raising the stakes for the U.S. and ROK having forces and targets on the peninsula, but also Japan because of Japan’s basing of significant U.S. military forces (Bernstein, Caves, & Reichart, 2007); page 5. North Korea also possesses substantial chemical and biological agents that could be used atop ballistic missiles. Japan’s BMD could, therefore, contribute not only to day-to-day coercion by ballistic missile threat, but also wartime deterrence challenges through its significant benefit-denial features.

⁷⁴ Page 87.

Korean Reconciliation & Beyond, 2003);⁷⁵ (3) development of a variety of ballistic missiles; (4) development and possession of nuclear weapons and other forms of weapons of mass destruction (WMD); (5) the sinking of a South Korean naval vessel killing dozens; (6) artillery attacks on South Korea; (7) conducting nuclear tests, with radioactive debris falling near Japan; (8) ballistic missile flights toward/over Japan; (9) proliferation of missiles, nuclear technologies, and other military capabilities; (10) abduction of Japanese citizens in the 1970s and 1980s (Kawashima, 2005);⁷⁶ (11) armed naval intrusions into Japanese territorial waters (Kawashima, 2005);⁷⁷ (12) North Korean capture and imprisonment of two Japanese fishermen in the mid-1980s (Kawashima, 2005);⁷⁸ and, (13) the sinking in 2001 of a North Korean ship by the Japanese Coast Guard (Chanlett-Avery, *The U.S.-Japan Alliance*, 2011).⁷⁹

Security strategies have been tried, and are ongoing, to try to modify North Korean behavior, such as: Six-Party Talks to curb North Korean nuclear weapons development; the Proliferation Security Initiative (PSI) to curb external proliferation activity; and trade, finance, and direct investment sanctions and carrots. Ballistic missiles present one of the biggest threats as they offer North Korea a cover for other provocations. Japan's response has been the development and deployment of missile defense capabilities to offset North Korea's extensive ballistic missile threat as a strategic choice to deter North Korea, influence its pattern of provocative behavior, and defend itself if needed.

Consequences

⁷⁵ Page viii.

⁷⁶ Page 2.

⁷⁷ Page 83.

⁷⁸ Page 82. They were released in 1990.

⁷⁹ Page 7.

Sentiments of Japan's imperial legacy in the region remain, often in raw exhibition such as arguments or demonstrations over textbook historical interpretations or Japanese leadership visits to shrines to honor its war dead. Japan was a source of imperialism and the conflict that it wrought in WWII. Today, both North Korea and Japan are living with these consequences. As the Cold War ended, North Korea found itself isolated and in decline; Japan found itself on the rise and increasingly autonomous. As Japan steadily grew in autonomy in the post-Cold War period, one consideration is the effect of Japan's autonomy with respect to stable relations with North Korea and the threats North Korea presents.

Japan-North Korea Relations⁸⁰

The role of Japan's missile defenses upon North Korean behavior lies in context of their broader political relationship. Domestically, philosophical perspectives shape Japan's views on its security. Japanese pacifists argue Japan has only been invaded once (12th Century) and reject the notion of deterrence, whether it relies on the U.S., Japanese forces, or a mix of the two. Realists, on the other hand, argue lessons of European history suggest Japan must take its security seriously, and effective deterrence and stronger military capabilities are best. National polls favor the latter (Kawashima, 2005).⁸¹ Generally, Japanese perceptions of the North Korean threat have risen steadily. Polling showed rising animosity among Japan's population toward North Korea, from 44% in the 1990s to 79% in 2005 (Rozman, Strategic Thinking about the Korean Nuclear Crisis: Four Parties Caught between North Korea and the United States, 2011).⁸²

⁸⁰ Much more on North Korean perspectives will be covered in Chapters Five and Six, two entire chapters dedicated to understanding North Korea, as the *deterree*; emphasis here is upon Japan as *deterrer*.

⁸¹ Page 9.

⁸² Page 172.

Politically, Japan has addressed the security challenges posed by North Korea on various levels: bilaterally, including the prospects of normalization; trilaterally, in conjunction with the U.S. and ROK; and multilaterally with many players such as the Six-Party Talks (Armstrong, Rozman, Kim, & Kotkin, 2006).⁸³ Recently, Victor Cha argued that, despite the dangers, Japan exhibits a guarded optimism in nurturing a cooperative relationship with North Korea as opposed to a heavy-handed one. Further, Japan seeks a peaceful outcome on the Korean Peninsula with a state friendly to Japan. A proactive approach appears its best alternative and, if successful, has the potential to provide a long-term hedge against China (Sokolski, 2005).⁸⁴ Japan's BMD plays a prominent role in "effective" deterrence and has strengthened its hand diplomatically with North Korea, China, and others.

Historical Interaction

Japan has had a long, historic relationship with the peoples of the Korean Peninsula. Like its modern relations with North Korea, Japan's relations with Korea have been marked by both cooperative and confrontational, or conflictual interactions. Cultural and economic interaction has existed between various regional leaders of Japan, China, and Korea for two millennia. Japan was essentially on the outer periphery of an international trade network between China and others. Interaction, especially trade, gradually shifted from simple assimilation of foreign techniques, to importation, to heavy exports by the 14th Century (von Verschuer, 2006).⁸⁵ Trade included an extensive amount of silver from Japan's Tsushima district to Korea for their use in trade with China—an

⁸³ Page 198.

⁸⁴ In his chapter, "Japan's Grand Strategy of the Korean Peninsula: Optimistic Realism." Pages 228 and 241.

⁸⁵ Pages 1-2 and 166-7.

activity described as a “Silver Road” (Kim Y. , Korea and Japan: The Clash of Worldviews, 1868-1876, 2006).⁸⁶

Japan attempted to invade the Korean Peninsula in the 16th Century, a fact not lost on Korean views of Japan to this day. On the other hand, the Kingdom of Korea maintained cooperative relations with Japan for nearly 300 years following that event. With modernization efforts in mind, and observations of imperialism of others in the region, Japan’s Meiji government began movement toward Japanese imperial expansion. Militarily armed, Japan clashed with China over Korea in the 1894 Sino-Japanese War and later, in 1904, with Russia over Korea and Manchuria. This led to Japan’s annexation of Korea in 1910 and years of Korean humiliation (Kawashima, 2005).⁸⁷ The Cold War was the dominant framework for the years following WWII and the end of imperial domination. As the Cold War ended, significant shifts occurred and it is at this juncture the dissertation begins emphasis.

Post-Cold War Period

While the Cold War came and went, repatriation of Koreans living in Japan back to North and South Korea occurred in context of “Asia’s Cold War,” something not yet settled. For example, in the 2002 summit between North Korea and Japan in Pyongyang, one part of the forthcoming Pyongyang Declaration was agreement to “sincerely discuss the issue of the status of Korean residents in Japan.” Furthermore, there was the more recent issue of 13 Japanese civilians captured by North Korean agents in the 1970s and 1980s and taken there to train their spies. This issue did not unfold until the late 1990s.

⁸⁶ Page 4.

⁸⁷ Pages 74-5. The most significant period, described above, was Japan’s occupation and domination over Korea in the late 19th Century and first half of the 20th Century. The North Korean perspective of this historical factor will be provided further in Chapters Five and Six.

The summit acknowledged this issue but it remains unsettled and a great source of consternation in Japan (Morris-Suzuki, 2007).⁸⁸ More broadly, Japan has not yet settled its imperial past with North Korea despite having done so with Taiwan in 1952, ROK in 1965, and China in 1972 (Shin, Park, & Yang, *Rethinking Historical Injustice and Reconciliation in Northeast Asia: The Korean Experience*, 2007).⁸⁹

As Japan's security evolved, it was faced with three overall policy choices: rely wholly upon the U.S. nuclear umbrella to manage threats; depend increasingly upon its own capabilities, including BMD; or, develop its own offensive nuclear weapons capability (Perry, Davis, Schoff, & Yoshihara, 2004).⁹⁰ Yutaka Kawashima argued another option was available: present North Korea with a "grand bargain" of peace in exchange for supporting the regime, an option not palatable by many (Kawashima, 2005).⁹¹ Following the 1998 surprise North Korean missile launch over Japan, Japan's approach was to acknowledge the threat and address it methodically through BMD and other activities, but also to engage North Korea politically in a positive way to reduce danger (Rozman, Togo, & Ferguson, *Japanese Strategic Thought toward Asia*, 2007).⁹² Japan chose BMD, at least for the near-term.

The Japan-North Korea relationship intersects important factors summarized below. These security factors also resonate with Japan's thinking in terms of choices made for research, development, acquisition and production, and deployment of its BMD system. They include: (1) the U.S.-Japan Alliance; (2) Japan's increasing sense of

⁸⁸ Pages 13-7.

⁸⁹ Page 2.

⁹⁰ Page 144.

⁹¹ Page 89.

⁹² In Cheol Hee Park's chapter, "Japanese Strategic Thinking toward Korea." Page 192.

independence and autonomy; (3) efforts between Japan and North Korea at political rapprochement; and, (4) the rise of the North Korean threat to Japan.

U.S.-Japan Alliance.

Japan struggles to define itself from a strategic culture perspective. Most seem to desire to guide Japan toward becoming a “normal country” free from its historical past, particularly its colonial, occupation, and wartime records. To do that, some, such as conservatives, justify militarization with regional threats, content to follow U.S. political leadership within the alliance structure—for now. Liberals within Japan, however, think it best to normalize political relations with North Korea and pursue regional reconciliation (Pollack J. D., *Korea: The East Asian Pivot*, 2004).⁹³ Without doubt, BMD strategies can serve both interests.

The Alliance between the U.S. and Japan is important to both parties. The mutual security arrangement between the U.S. and Japan in the form of the Japan-U.S. Security Treaty provides for Japan’s defense by the United States. The treaty, which provides for access of U.S. military forces to Japan, is limited to U.S. aid in the event of “armed attack;” Japan carries no such commitment to aid the U.S. in case the U.S. was attacked (Governments of Japan and the United States of America, 1960).⁹⁴ The treaty was principally an outcome of the Cold War and anti-Soviet expansion though potential adversaries were not named in the treaty. With the Cold War’s end, the security focus shifted to regional threats like North Korea and WMD (Kawashima, 2005).⁹⁵

⁹³ In Phillip Wonhyuk Lim’s chapter, “North Korea’s Economic Futures: Internal and External Dimensions.” Page 186.

⁹⁴ See Article V.

⁹⁵ Pages 38-9.

Redefining the post-Cold War threat by the U.S. and Japan, Japan experiencing partial freedom from its war guilt, and Japanese maturation (including its own economic and military capabilities) have placed the security relationship under some stress and raised some question as to the future role of the formal defense treaty. For example, in the 1990s, when Japan's economy was rapidly expanding, some suggest the U.S. began to view Japan with suspicion and as a threat to the U.S. (Rozman, Togo, & Ferguson, *Japanese Strategic Thought toward Asia*, 2007).⁹⁶ Additionally, gaps in security affiliation were revealed in the financial (not military) support Japan ultimately provided following the 9/11 terrorist attacks (Heginbotham & Samuels, 2002).⁹⁷ Still others argue the Alliance can actually get in the way, such as the Koizumi-Kim summit in August 2002. This event, part of Japan's efforts at political normalization with North Korea, ran counter to U.S. policy at that time (Hagstrom & Soderberg, *North Korea Policy: Japan and the Great Powers*, 2006).⁹⁸

The U.S. also provides extended deterrence for Japan by threatening to punish nuclear attacks upon Japan with U.S. nuclear retaliation. Ken Jimbo argued the credibility of U.S. extended deterrence to Japan, too, was fragile. In this case, and in light of threats from North Korea, Japan would rely upon its own BMD and, if necessary, develop its own conventional military capabilities, options other regional actors do not welcome. Japan would not, however, likely "go nuclear" in Jimbo's view (Self & Thompson, 2003).⁹⁹ Still others argue Japan *should* go nuclear to contain the North Korean threat.¹⁰⁰

⁹⁶ In Cheol Hee Park's chapter, "Japanese Strategic Thinking toward Korea." Pages 187-8.

⁹⁷ Page 110.

⁹⁸ Page 14.

⁹⁹ In his chapter, "Rethinking Japanese Security: New Concepts in Deterrence and Defense." Pages 24-5 and 40. More specifically, Benjamin Self and Jeffrey Thompson, while acknowledging Japan has many of the capabilities needed for bomb development and missile-based delivery, point to Japan's many internal

Japan's Increasing Independence

Cultural, economic, and political factors have been driving Japan toward greater autonomy and independence since WWII. Culturally, Dower argues Japan experienced a “forced Americanization” following its own colonial experience and defeat in WWII, a feature of Japanese culture that added to national disgrace and impacted national identity (Dower, 1999).¹⁰¹ Japan also finds itself entrapped by its past in some respects, though there is a growing belief Japan has been forced to abide by standards no other nation has faced and must somehow escape its postwar “legacy of subordinate independence” (Dower, 1999).¹⁰² Still alive through the Alliance structure, these psychological features may help explain Japan’s partial willingness to avoid complete dependence on the U.S. for its security.

In fact, Japan’s security position has changed markedly since its period of weakness following WWII: its economy is one of the world’s strongest; its technology base is of global stature; and, its leadership role in the region on political and economic issues continues to rise (Green & Cronin, *The U.S.-Japan Alliance: Past, Present, and Future*, 1999).¹⁰³ Richard Samuels argued Japan’s strategic culture is now marked by moves to a grand strategy “based on respect.” More than simply autonomous, Japan’s emergence in the new security environment means its junior status with the U.S. itself

policy and technical self-restraints which should allay fear of a Japanese nuclear breakout: transparency in international inspection and safeguards; storing of most surplus plutonium overseas; lack of technical expertise in bomb or warhead design; and, overlapping policy bodies to police each other (Self & Thompson, 2003); page 176. See also: (Chanlett-Avery & Nikitin, *Japan's Nuclear Future: Policy Debate, Prospects, and U.S. Interests*, 2009). It must also be remembered that Japan, like other states in the international system, has an inherent right to self-defense under Article 51 of the UN Charter. Development and deployment of BMD is clearly a Japanese right.

¹⁰⁰ Charles Krauthammer argues Japanese acquisition of nuclear weapons is the only “card” remaining that might be able to reverse the North Korean nuclear program (Krauthammer, 2006).

¹⁰¹ Pages 25-6.

¹⁰² Pages 562-3.

¹⁰³ In Thomas Berger’s chapter, “Alliance Politics and Japan’s Postwar Culture of Antimilitarism.” Page 190.

may have fundamentally shifted, a partnership he suggests “may be slipping into history” (Samuels, *Securing Japan: Tokyo's Grand Strategy and the Future of East Asia*, 2008).¹⁰⁴ BMD, while serving political purposes with Japan’s relationship with the U.S., is also an important part of Japan’s overall interest in recreating an autonomous military industrial complex following WWII (Samuels, “Rich Nation, Strong Army:” *National Security and the Technological Transformation of Japan*, 1994).¹⁰⁵

For these reasons Japan today reflects a much more assertive political and military posture. Kenneth Pyle, for example, identified several ways in which Japan, since the end of the Cold War, adapted itself to the new security environment. These include: (1) ending a ban on overseas deployment of its forces allowing, for example, deployment of noncombat troops to Cambodia in 1992; (2) easing of the long-held narrow constitutional interpretation of Article 9 banning collective self-defense activities, permitting deployment of troops to Afghanistan and Iraq; (3) acquisition of power-projection capabilities such as air refueling Boeing 767 tankers; (4) breaking of the taboo of discussion of acquisition of nuclear weapons; (5) breaking of the prohibition of sharing military technology and exporting arms through acquisition of BMD capabilities from the U.S. but then sharing related advanced technology; (6) growing its defense spending; though officially about 1% of GDP, Japan has masked its military spending throughout the budget and it could now be the world’s third or fourth largest; (7) abandoning

¹⁰⁴ Pages 186-8 and 208. Michael Green argued Japan would not likely view its regional security threats in the same way as the United States. He recommended, therefore, the U.S. recognize “Japan as an independent actor” and spend more time listening to, instead of lecturing, Japanese officials (Green, *Japan's Reluctant Realism: Foreign Policy Challenges in an Era of Uncertain Power*, 2003); pages 283-4.

¹⁰⁵ For example, less than 10 years after WWII, and shortly after the new Japan Defense Agency (JDA) was created, Japan began in earnest to recapture a strategy of autonomous missile-related research and development (R&D). By the mid-1990s all parts for Japan’s Patriot missile, for example, were built in Japan. Pages 144 and 187-8. See also: Green, *Arming Japan: Defense Production, Alliance Politics, and the Postwar Search for Autonomy* (1995), pages 2 and 163.

prohibition of the military use of space, including decisions to deploy reconnaissance satellites in 2003; and, (8) make other institutional changes beyond easing Article 9 interpretation, such as enlarging the role of the office of prime minister in defense issues; the passing of many new laws to afford more nimble crisis management in case of attack or crises; and, raising the Defense Agency to ministry status, with a new headquarters complex built upon the original site of Japan's Imperial War Ministry (Pyle, 2007).¹⁰⁶

Japan's autonomous rise is also reflected in how it carries itself in its relationship with North Korea, China, and in international organizations. For example, Linus Hagstrom and Marie Soderberg argue Japan has since the early 1990s pursued an autonomous strategy toward North Korea, acting in the post-Cold War period out of concern for its own security interests and in light of regional changes. Japan was essentially becoming a "normal" military power and this was showing itself with North Korea. Japan has also threatened to cut funding to the UN unless it is elected a permanent member of the Security Council (Hagstrom & Soderberg, *North Korea Policy: Japan and the Great Powers*, 2006).¹⁰⁷ Economically, Japan interacts with key actors, including potential U.S. adversaries, such as Iran and China, to guard against what Japan sees as economic threats, suggesting Japan's willingness to depart from U.S. interests to protect its own in the future is rising (Heginbotham & Samuels, 2002).¹⁰⁸ The U.S., for its part, has had to work to allay fears in China and ROK that Japan's emergence will not be a militarily assertive one (Menon, 2007).¹⁰⁹ Japan's BMD specifically faces strong

¹⁰⁶ Pages 366-73.

¹⁰⁷ Pages 1-4.

¹⁰⁸ Pages 111 and 120. Menon argues the U.S. sees alliances as subtracting from its security, has avoided them historically and, in the case of Japan, has been the initiator of greater Japanese autonomy (Menon, 2007); pages 20 and 106-10.

¹⁰⁹ Page 101.

opposition by China, citing fears it undermines its nuclear deterrent capabilities (Cossa, *Restructuring the U.S.-Japan Alliance: Toward a More Equal Partnership*, 1997).¹¹⁰

Rapprochement.

Japan seems to have taken a long-term political approach in its relational strategies with North Korea, particularly since the end of the Cold War. This reflects the preferred deterrence approach advocated by George and Smoke. They argued deterrence can be described in short-term (crisis) problems and long-term influence strategies between two actors seeking to coexist. The deterrer, they argued, should seek to guide change between the two actors in a favorable political direction rather than existing in a perpetual deterrence relationship. Rapprochement and political normalization is a reflection of this reality for Japan (George & Smoke, *Deterrence in American Foreign Policy: Theory and Practice*, 1974).¹¹¹

Near the end of the Cold War it was North Korea that proposed normalization of relations with Japan in late 1990, presumably after losing political and economic support from the failing Soviet Union. North Korea expected compensation for Japan's colonial past, as it had done with South Korea. The ROK objected, fearing a large infusion of funds would merely fuel North Korean military capabilities and alter the balance of power on the peninsula much more in North Korea's favor (Kawashima, 2005).¹¹² That deal fell through, as did attempts in subsequent years. The key stumbling block surrounded money—an instructive lesson for North Korean coercive use of its ballistic missile activities to exploit Japan and others. Reconciliation stalled due to North Korean

¹¹⁰ In Michael Green's chapter, "Theater Missile Defense and Strategic Relations with the People's Republic of China." Pages 111 and 113.

¹¹¹ Pages 604-5.

¹¹² Pages 80-1.

demands for financial compensation, specifically on four counts: for Japan's colonial rule; for Japan's WWII war reparations; for losses North Korea incurred when Japan normalized relations with ROK; and, damages North Korea incurred due to Japan's complicity during the Korean War (Hagstrom & Soderberg, North Korea Policy: Japan and the Great Powers, 2006).¹¹³ It is difficult to assess what the total amount of all of these demands would be, but the figure would be many billion dollars.

A deal appeared closer in 2002. An executive-level summit emerged in Pyongyang on 17 September 2002, producing: the Pyongyang Declaration; Japan apologizing for colonial suffering; the waiving of all colonial-era claims; KJI personally apologizing for abductions; and North Korean agreement to extend a missile testing moratorium (started in 1999). A second summit between KJI and Prime Minister Koizumi occurred in Pyongyang on 22 May 2004. The moratorium was extended and North Korea released family members of two abductees; Japan agreed to provide food and health aid. But this exchange did not play well in Japanese domestic politics (Hagstrom & Soderberg, North Korea Policy: Japan and the Great Powers, 2006).¹¹⁴ No significant measures since then have furthered the political process of rapprochement, though this is clearly Japan's long-term preference.

Rise of North Korean Threat to Japan.¹¹⁵

The threats from North Korea to Japan stem from its ability to deliver munitions via ballistic missiles in minutes and how they use that capability to coerce. Being able to do so, and testing the missiles in provocative ways, can create a range of threatening effects: instilling fear among its population; coercing Japan to concede an economic or

¹¹³ Pages 14 and 22.

¹¹⁴ Pages 24-6.

¹¹⁵ Again, more information on North Korea's capabilities will be provided in Chapters Five and Six.

political benefit; provoke a response favorable to North Korea domestically or in its relations with China; to punish it for past grievances; or, to exploit its vulnerability to being drawn into a conflict between North Korea and the U.S. and incurring grave consequences as a result. North Korea's ballistic missiles lie at the center of its threat because it can use these directly to threaten, or as an escalatory tool.

Regarding North Korea's ballistic missile threat, Victoria Samson argues North Korea's main threat to Japan and the U.S. stems from its short-range ballistic missiles (SRBMs) and medium-range ballistic missiles (MRBMs), not its intercontinental ballistic missile (ICBM) class Taepodong. These include 500 Scud B and C model SRBMs and 320 Nodong MRBMs, the latter of which is WMD-capable (including nuclear-armed) and can range Japan but cannot be intercepted by the U.S. homeland-defending interceptors in Alaska and California (nor were the U.S. interceptors designed for these range missiles). She further suggests North Korean missiles, because they have poor accuracy, are likely planned more as "shock" weapons than precision weapons. North Korea continues to be the world's leader in ballistic missile proliferation (Samson, 2010).¹¹⁶

But even conventionally-armed ballistic missiles are a threat to Japan given North Korea's intentions to use them for coercive purposes. Robin Ranger recognized conventional ballistic missiles were a strategic threat because of their very significant political effect upon the one attacked (especially if civilian casualties occur) and,

¹¹⁶ Pages 11-2, 14. Of all the ballistic missile threats facing Japan, the 2001 RAND study suggests the North Korean Nodong-1 MRBM (also referred to as a Scud Model D) is the greatest threat. North Korea possessed approximately 100 of these missiles, and their numbers were possibly increasing. Chemical, biological, and conventional weapons are likely the gravest threats posed by these ballistic missiles (Swaine, Swanger, & Kawakami, 2001); pages 11-4 and 17. This study does not consider North Korea's cruise missiles to be a significant threat to Japan. The greatest threats to Japan from China are its MRBMs and IRBMs. Some authors refer to Nodong as "Rodong."

similarly, the high political gain that could be wrought by the attacker. Such was the scenario when Iraq used conventionally-armed ballistic missiles in the Gulf War to split Arab members from others in the coalition and to cause enough civilian and military casualties in places like Saudi Arabia to retard military operations against Iraq. This demonstrated that ballistic missiles had become the weapon of choice for “strategic intimidation” by regional actors against the U.S. and its regional allies (Ranger, 1998).¹¹⁷ These types of factors and historical events likely weighed heavily in Japanese leadership calculations concerning missile defenses since the Gulf War demonstrated the value missile defenses can have against such threats. Tokyo, Japan, for example, is particularly vulnerable to coercion by fear of any type of ballistic missile attack or accident.¹¹⁸ These fears might stem from, for example: Japan’s imperial domination of the Korean Peninsula; Japan’s alliance with the U.S. and basing of its military forces in Tokyo; and, Tokyo is the center of Japanese economic vitality and the source of a preponderance of Japan’s economic output.

Both North Korea and Japan recognize the significance even of North Korean ballistic missile *tests*. These events, and the reverberations that follow, demonstrate their value to North Korea, but their source of anxiety by Japan. In September 2002, in an agreement with Japan, North Korea extended a pledge to maintain a moratorium on ballistic missile flight-tests. However, only a month later North Korea acknowledged existence of a secret uranium program, significantly raising regional tensions. On 4-5 July 2006, North Korea resumed missile tests including several short and medium-range and a long-range TD-2 missile. Japan was the initiator of an emergency meeting of the

¹¹⁷ Pages 149-51.

¹¹⁸ According to Leonid Ryabikhin, ballistic missiles remain the most effective means of delivering WMD (Ghoshroy & Neuneck, 2010); pages 83-6.

UNSC as a result. North Korea conducted its first test of a nuclear device on 9 October 2006. Reaction in Japan to the nuclear test was “relatively restrained” though public discussion of Japan pursuing a nuclear weapons program emerged with more openness (Burns, 2010).¹¹⁹ More missile tests occurred in 2007 and 2008. On 5 April 2009 another TD-2 was tested, followed by a second nuclear test 25 May, and then more short-range missile tests. Between 2-4 July 2009 North Korea launched 11 missiles, including KN-01, Scuds, and three Nodongs, all landing in the Sea of Japan and precipitating a strong Japanese reaction that included a government characterization of North Korean behavior as a “serious act of provocation against the security of neighboring countries” (Burns, 2010).¹²⁰

The ultimate threat to Japan is attack with nuclear weapons. North Korea, in the early 1990s, used its plutonium reactor to begin producing sufficient quantities for a small number of nuclear bombs, but it had the potential to produce 100 weapons per year if unchecked. A deal was struck in 1994 to curtail such expansion but not before North Korea had stored up plutonium for 2-3 weapons. Japan’s part of the deal was to provide \$1 billion worth of funding to help build a no-threat nuclear reactor in North Korea (Kawashima, 2005). Efforts to curtail North Korea’s nuclear program have had mixed results at best. While uncertainty remains over exact North Korean nuclear weapons capabilities, it appears possible it can deliver these weapons with ballistic missiles against regional actors including Japan.

Japan’s BMD Program.¹²¹

¹¹⁹ Pages 99-100, 102-3.

¹²⁰ Page 101.

¹²¹ Throughout the dissertation, reference to Japan’s BMD speaks to Japan’s domestic regionally-oriented BMD system. It is essentially its own homeland defense system. It does not include the broader U.S.

As sketched above, Japan's response to the threats include development of a capable BMD program to deter North Korea by denying the North its underlying, if not blunt, instrument of coercion, and to defend against ballistic missile attack in wartime.¹²² Japan is faced with the situation in which North Korean shorter range missiles, immune to U.S. national BMD systems, could threaten or attack Japan independent of any general attack on the peninsula. As a result, BMD not only defends U.S. forces in wartime contingencies, but more closely connects to protection of Japanese people and *its* interests, particularly in pre-conflict situations.¹²³ Japanese possession of a credible domestic BMD system of its own would set the U.S. retaliatory option in the background behind Japan's independent defensive capability. Defenses, however, if possessed and deployed are expected by the public for basic national security. This argument, too, makes sense from a Japanese vantage point where the North Korean threat (given its behavior and stockpile of ballistic missiles) and Japanese domestic politics (given

Ballistic Missile Defense System (BMDS), its national homeland defense subset of BMDS called the Ground-based Midcourse Defense (GMD) system, or former U.S. missile defense names, including National Missile Defense (NMD) or Anti-Ballistic Missile (ABM) defense systems. Only a limited number of states possess, are developing, or are considering acquisition of BMD capabilities. These include: U.S.; China; Israel; Japan; ROK; Italy; France; UK; Germany; Spain; Greece; Denmark; Russia; UAE; Netherlands; India; Taiwan; and, Saudi Arabia. Different sources reflect different lists of states possessing or seeking BMD capabilities. See, for example, Hildreth & Ek (2011). Interestingly, North Korea has not developed a BMD capability.

¹²² Japan's BMD system is explicitly identified by the Government of Japan as part of its "deterrent" capability. See, for example, a December 2010 MOD report where the role of Japan's BMD was identified under the heading "Effective deterrence and response" (Japanese Ministry of Defense, 2010); page 10.

¹²³ Patrick O'Donogue argued the U.S.-Japan alliance, though critically important to both countries, was not a perfect defense nor did the U.S. nuclear umbrella, used to "extend deterrence" of North Korea with U.S. nuclear weapons, cover all situations in the region (O'Donogue, 2000); pages 1-3. He describes three broad categories where Japan's BMD development will be seen: operational initiatives; doctrine; and, refinement of Japanese Self-Defense Forces (JSDF) roles. These categories may also be areas of Japanese actions discernible by North Korea and activity in these areas could precipitate North Korean decisions and behavior. For Japan, the TD-1 missile launch made its public well aware of the need for a means of self-protection in the face of regional actors. While North Korea was the more immediate danger, Japan was aware Chinese missiles aimed at Taiwan could just as easily target Japan as could emerging Chinese road-mobile missiles. O'Donogue, pages 6-8, 13, and 15. On the threat posed by North Korean and Chinese ballistic missiles see Figure 1 (p. 7) and Figure 2 (p. 10) depicting range lines of their respective ballistic missiles.

constraints on offensive military capabilities) combine to undergird the value of ballistic missile defense.¹²⁴ BMD should, however, be recalled as an instrument in context of the broader Japan-North Korea relationship in which cooperative engagement also exists.¹²⁵

Japan engaged in various activities in response to the ballistic missile threats it perceived including many internal and cooperative studies (other decisions, such as creation of BMD-related governmental agencies, limited research and production of missile defense technologies, and decisions on BMD-related acquisition followed).¹²⁶ By far the most significant event pushing Japan toward actually fielding a BMD system was the North Korean test flight of a Taepodong-1 (TD-1) missile on 31 August 1998. The

¹²⁴ While defense of Japanese homeland with PAC-3 missiles, for example, does not raise constitutional issues, other scenarios are less clear or deemed prohibited. Using Japanese BMD to defend against missile attacks on Japanese ships at sea is legal, while defending U.S. ships at sea is less clear as that might be construed as “collective self-defense.” Likewise, in a Korean peninsula or Taiwan Strait conflict, Japanese BMD might be expected to defend U.S. troops in Korea or near Taiwan, though this is clearly not self-defense. Further, intercepting an attacking missile in its boost-phase would be considered collective self-defense since Japan’s BMD would essentially be defending all regional nations because the attacking missile’s type and heading would not be known. See, Abmann (2007), pages 339-57, including the charts on p. 344 and p. 357. On Article 9 of Japan’s constitution, see also pages 367-9. For a discussion of these scenarios see pp. 376-90.

¹²⁵ Kiziah states it as follows: lower the value of North Korean and Chinese ballistic missiles (given their proclivity to use them to antagonize others in the region), thereby deterring North Korea and China from using their ballistic missiles for political or military objectives; and, to protect U.S. and allied interests if deterrence fails (Kiziah, 2000); pages 11, 13. According to Thomas Christensen, cited in Kiziah’s book, Japan is more likely to oppose Taiwan’s integration with mainland China than the United States, given Japan’s economic and historical connections to Taiwan. See page 21.

¹²⁶ Many studies were conducted and included: the “Western Pacific Missile Defense Architecture Study,” undertaken in 1989, which recommended Japan consider acquisition of THAAD and sea-based missile defense capabilities in response to the Nodong, considered to be the greatest threat to Japan; a security policy vision report in August 1994 that recommended development of military reconnaissance satellites and development and deployment of a BMD system to counter ballistic missile threats from North Korea and China; the Japanese-led “U.S.-Japan Bilateral Study on Ballistic Missile Defense,” initiated in January 1995 and completed in 1997, which identified various technologies Japan could develop that also had value to the U.S.; the “On Research Concerning Ballistic Missile Defense” report issued by the Japanese Defense Agency (JDA) in August 1995, which recommended Japan pursue missile defense capabilities beyond the PAC-2, considered deficient to match the threat; a three-year feasibility study by JDA begun following the December 1995 Mid-Term Defense Program for FY 1996-2000 and completed in 1998, which examined a layered BMD approach modeled for defending against “tens of North Korean IRBMs” with 80% effectiveness, a capability estimated to cost \$20 billion and 40% of Japan’s annual defense budget; and, a report called “The Joint Declaration and Future National Security” issued April 18th, 1997, by the Liberal Democratic Party (LDP) Policy Affairs Research Council, which recommended more joint studies with the United States (Swaine, Swanger, & Kawakami, 2001); pages 29-32.

missile's trajectory, consistent with that expected of a launch to place a satellite into orbit (North Korea's stated intentions for the flight) took the TD-1 directly over Japan. The TD-1 was a three-stage missile, with the first stage falling into the Sea of Japan, the second stage falling into the Pacific Ocean near the northeastern coast of Honshu (Japan's main island), and the final stage failing partway into powered flight and landing in the ocean. The launch was a surprise to all, creating feelings of unpreparedness among Japan's public, but the test was also a technological surprise even to the U.S. in that it used a third stage: a capability not attributed to the TD-1 missile nor to North Korean engineers. The first stage was a Nodong and the second a Scud C, both North Korean produced missiles (Kiziah, 2000).¹²⁷

The time had come for studies to transition to action. While other domestic constituencies existed in Japan, immediately after the launch both houses of Japan's Diet condemned the launch and recommended Japan seek the means necessary to provide protection of its population (Swaine, Swanger, & Kawakami, 2001).¹²⁸ At that time, Japan had three broad military options available to address the ballistic missile threat:

¹²⁷ Page 1. The TD-1 test not only surprised, but enraged, Japanese leaders and citizens alike pushing Japanese decision-making on TMD development, slow for years, into rapid motion and, on 16 August 1999, signed a memorandum of understanding (MOU) with the U.S. to engage in a three-year joint TMD program. The MOU pointed to joint R&D to transform the Standard Missile-3 (SM-3) "Block I" missile into a new "Block II" variant. This effort would focus on the missile's nose cone, warhead, infrared seeker sensor, and second-stage propulsion system. Like Japan, the ROK also decided to act in response to the TD-1 test. However, in contrast to Japan's defensive decision, South Korea chose to advance its efforts to indigenously develop offensive ballistic missiles. From the ROK perspective, missile defenses would not help deter North Korea because they did not aid against the massive Scud and artillery threat. The South Koreans preferred an offense-based deterrent with the range to strike North Korea's capital of Pyongyang. Pages 2, 13-14, 16-7. ROK tested a Hyonmu (NHK-2) missile on 10 April 1999, flying 40 km. This missile may have a maximum range of 300 km, however, since it apparently was only partially fueled. See p.17. Japan was invited to participate in joint missile defense research as part of SDI in 1985, along with South Korea and Australia, and was the only one of the three countries to engage in joint research beginning in 1987. See footnote 5, p. 26. Factors of greatest concern since that event involve acquisition of protective capabilities, particularly BMD, and independent surveillance satellites to monitor North Korean activities (Swaine, Swanger, & Kawakami, 2001); pages 61-3.

¹²⁸ Page 34.

offensive measures; passive defenses; and, active defenses. Only active missile defenses would have the needed psychological deterrent effects upon North Korean leadership (Swaine, Swanger, & Kawakami, 2001).¹²⁹ The formal, publicly-announced Japanese government decision to pursue BMD emphasized the defensive nature of the system with a principle purpose “to protect life and property of the citizens of Japan against ballistic missile attacks.” Further, the “system requires interception of missiles by Japan's own independent judgment based on the information on the target acquired by Japan's own sensors” (Government of Japan, 2003).¹³⁰ This clearly stated Japan’s intent to have a capability that can operate and defend Japan independent of U.S. capabilities or oversight.

Japan’s BMD development path has taken it in two directions: acquisition of its own capability to address current North Korean threats; and, joint development of new capabilities to address future threats with the SM-3 Block IIA missile system years away from deployment (Takahashi, Ballistic Missile Defense in Japan: Deterrence and Military Transformation, 2012).¹³¹ The former is the emphasis of the dissertation as it is foundational to Japan’s deterrence strategy. Over time, Japan would devote significant resources and political support to pursue its BMD system through development, outright purchase and acquisition, and deployment. The Japanese multilayered missile defense system, using its sea-based Aegis and land-based Patriot PAC-3 BMD assets, provides

¹²⁹ Unlike South Korea, Japan has excluded the pursuit of offensive weapons that could be used against North Korea. Offensive systems, such as conventionally or WMD-armed strike aircraft or ballistic missiles, while having deterrence value, would be destabilizing regionally and fraught with historical and domestic barriers. Passive defenses, such as civil defense, might reduce some casualties. Pages ix-xi, 24-9. Key Japanese domestic actors involved in the decision-making regarding BMD include: prime minister and his cabinet; JDA and Japan’s military forces; MoFA; Ministry of Finance (MoF); the Diet; political parties; METI and private business; and, the public and media (Swaine, Swanger, & Kawakami, 2001); pages 41-5, 63.

¹³⁰ See paragraph number 5.

¹³¹ Page 11.

Japan with autonomous capabilities against ballistic missile threats. “Layering” of BMD provides different interceptor missiles to engage attacking missiles at different altitudes, engaging the missiles with overlapping layers of defensive coverage. Japan’s BMD system is also “interoperable” with the U.S. BMD system through radar detection capabilities based in Japan (Missile Defense Agency, 2009).¹³² In 2007, Japan deployed its first operational BMD asset and to date has deployed four BMD-equipped Aegis ships and 16 PAC-3 firing units, along with the necessary command and control assets (Japan Ministry of Defense, 2010).¹³³ The latest government projection is that Japan will acquire and deploy six Aegis BMD ships and six PAC-3 firing units (Japanese Ministry of

¹³² Page 9. According to Lars Abmann, Japan’s enhanced PAC-3s would provide a footprint of about 40km wide and enough to protect one metro area (such as Tokyo, Osaka, Nagoya, or Fukuoka) against North Korean SRBMs or MRBMs in their terminal phase of flight. Defending urban centers (versus forward-deployed troop concentrations) is Japan’s primary defense need, so PAC-3s are beneficial. Sea-based platforms, such as Aegis, however, are optimum for Japan given its island chain geography (Abmann, 2007); page 133-7. The Aegis system, which evolved from the Navy Theater-Wide (NTW) system, is comprised of both SM-2 and newer SM-3 interceptors, the SPY-1 radar, a launching system, and a command and control system. Its primary purpose is protection from short- and medium-range ballistic missile attack. It is designed to engage attacking missiles in midcourse of flight in the exoatmosphere (late ascent or descent phase). Samson suggests the later SM-3 variant, when developed, might have a capability to engage ICBMs in midcourse flight. As of 2009, Japan had successfully intercepted 2 of 3 target attempts (Samson, 2010); pages 79-80. Sensors needed for, or supporting, the U.S. system against North Korean threats include the Sea-Based X-band Radar (SBX), a powered floating former oil rig turned mobile missile defense sensor, and a land-based AN/TPY-2 X-band radar positioned at Shariki Japan. These radar are essential in providing discrimination of target warheads from decoys (Samson, 2010); pages 51-2 and 57. In addition to Japan’s pursuit of its own reconnaissance satellites, it could use commercially-available quality satellite imagery such as that provided of a North Korean launch facility by the civilian Ikonos satellite (Handberg, 2002); page 147.

¹³³ Page 9. Japan plans deployment of 133 SM-3 Block IA and IB missiles to Aegis ships by 2013 and, to address threats from longer-range missiles, the SM-3 Block IIA is being developed jointly by the U.S. and Japan. This missile, which will fly faster than the Block I variant, will improve Japan’s potential to intercept IRBMs like the Nodong, and will have a limited capability against ICBMs. While Aegis SM-2 missiles engage attacking missiles inside the atmosphere (endoatmospheric intercept), SM-3s engage in the exoatmosphere. Another principal difference between these missiles is that the SM-2 uses a blast-fragmentation type warhead while SM-3’s warhead actually collides with the target (Burns, 2010); pages 124-5. According to Samson, Japan is also interested in purchasing THAAD to work with its PAC-3 and Aegis systems (Samson, 2010); page 133. The THAAD system, designed to engage missiles in the upper-tier, provides a layered capability when joined with Patriot PAC-3 missiles which can engage lower-tier missiles. The United Arab Emirates, in 2008 purchased THAAD from the U.S. and, later that year, ordered the purchase of PAC-3s from the U.S. providing it a layered BMD capability.

Defense, 2010).¹³⁴ This could mean approximately 540 SM-3 missiles on Aegis and 120 PAC-3 missiles, providing Japan a capability to defend against potentially dozens of attacking ballistic missiles.¹³⁵

Japan is addressing the missile threat both with organizational and technical remedies. The flight time of a North Korean offensive ballistic missile to Japan is about 10 minutes, compressing time available for decision-making and defense (Kaneda, Tajima, Kobayashi, & Tosaki, 2007).¹³⁶ For this reason, Japanese leaders have provided delegation of authority to launch BMD assets below the political leadership to military commanders. This is also why early detection capabilities are of significant concern to Japan. Launch detection in particular is provided only through U.S. Defense Support Program (DSP) space-based capabilities (Kaneda, Tajima, Kobayashi, & Tosaki, 2007)¹³⁷ raising questions of Japan's ability to provide for its own security independently. An indigenous tracking capability provided through its Aegis system provides Japan an autonomous BMD capability able of independent operations against North Korean ballistic missiles without tracking capabilities otherwise provided by the United States.

¹³⁴ See the table, page 20.

¹³⁵ The figures here are pieced together from different sources and may not reflect the realities of Japan's actual BMD interceptor force or the capacity of that force to engage North Korean attacking ballistic missiles. The potential Aegis BMD missile totals stem from Laura Grego's analysis (Grego, 2012) that Aegis destroyers carry 90-96 interceptors per ship (therefore, Japan's six Aegis BMD ships could have 540-576 missiles total); Japan's MOD BMD document (Japan Ministry of Defense, 2010), slide 13, states each of its six firing units has five launchers each pictured with four missile tubes per launcher for a total of 20 missiles per firing unit (therefore, the six PAC-3 firing units could have 120 missiles total); the net total of Japan's BMD interceptors available to shoot, therefore, could be 660 or more. The idea of dozens of North Korean attacking missiles comes from using a 4:1 ratio of BMD interceptors per attacking missile (Larson & Kent, 1994), pages xii-xiii and 56-8; this could potentially allow Japan's BMD to engage 165 incoming missiles, though this would vary greatly under different conditions.

¹³⁶ Page 92.

¹³⁷ Page 84. Such short flight times are also why preemptive "offensive defense" capabilities make sense to some in Japan: credibly threatening to strike ballistic missiles on their launch pads with conventional precision-guided weapons, coupled with effective layered BMD, would provide Japan a far more robust deterrence set of tools. However, the challenges to such a policy are many.

What was lacking is a capability to detect a North Korean missile at the time of its launch. Such a capability could be provided by infrared sensors located in space, a capability currently provided by the U.S. on behalf of Japan, but not possessed by Japan. Alternatively, surface-based radar, such as the land-based x-band radar deployed in northern Japan in 2006 can provide the U.S. and Japan detection and warning of missiles early in flight. This facility, however, and the new facility planned for 2013 in southern Japan, is operated by the U.S., not Japan.¹³⁸

On April 5 2009, a longer-range variant of Taepodong was launched, but the North Koreans opted to comply with a United Nations request for safety of flight and navigation pre-launch notifications. In the lead up to the launch Japan gave orders to field its BMD assets, defend Tokyo and other areas, and prepare to shoot the missile down (Japan Ministry of Defense, 2009).¹³⁹ The behavior and statements of North Korea for the 2009 event were clearly different from the 1998 surprise launch—did North Korea change the missile’s flight profile to one that was less threatening to Japan in response to awareness of Japan’s BMD? If so, Japan achieved a deterrent effect for which its BMD was designed.

In April and December 2012, North Korea launched Taepodong missiles from its new Sohae Satellite Launching Station in northwestern North Korea. In both cases Japan again deployed BMD assets and were prepared to engage the North Korean missiles. Both missiles flew southerly over open ocean (the April launch failed shortly after

¹³⁸ According to the Nuclear Threat Initiative (NTI), Japan’s Basic Space Law was enacted on 27 August 2008 lifting the ban on military use of space. Then, in January 2009, Japan’s MOD released its policy on military use of space including how such actions will improve Japan’s BMD system (Toki, 2009); see the section entitled, “Japan’s space policy change.” These improvements will help Japan be more autonomous in space to support its BMD system but will not, however, provide it with an infrared launch detection system similar to the U.S. DSP.

¹³⁹ Issued in response to advance notice provided on March 12, 2009, by North Korea to the UN.

launch; the December launch successfully placed a satellite into orbit for the first time in North Korean history). The 2009 and April 2012 launches were not handled well by Japanese authorities due to miscues in information handling and decision errors: in the 2009 launch, the MoD announced the launch a day ahead of the actual launch; in the April 2012 launch they did not announce the launch until an hour later; these issues seemed to be remedied by the December 2012 satellite event (Takahashi, Ballistic Missile Defense in Japan: Deterrence and Military Transformation, 2012).¹⁴⁰ Despite these shortcomings in Japanese command and control, North Korea again changed its missile flight behavioral pattern in Japan's favor by launching missiles to the south away from Japan's main population centers. It is possible North Korean missile launches to the east could no longer fly the distance North Korea desired fearing they would be shot down by Japan's BMD, or the North Koreans desired lower conflictual interaction with Japan at that time.

Consequences

Japan-North Korea relations exist as an independent interactive political process. However, historical events, security alignments of various parties, threats and military capabilities interplay in, and occasionally overshadow, these relations. Several factors are dynamic, reflecting a changing security environment for Japan, including: a relative decline of U.S. global and regional hegemony particularly given China's rise; greater Japanese independence; and changes to North Korea internally. Japan is adapting and must confront the near-term threat it perceives from North Korea. BMD is a key feature of this adaptation.

¹⁴⁰ Pages 12-4.

In the long-term, Japan seeks a political solution with North Korea. Rozman, for example, believes Japan will do so through economic integration policies. This, he argues, will only occur after North Korean capitulation on the abduction issue and the threats presented by its ballistic missiles and nuclear weapons (Rozman, *Strategic Thinking about the Korean Nuclear Crisis: Four Parties Caught between North Korea and the United States*, 2011).¹⁴¹ Such a long-term approach is complicated by the North's internal stability, however. Many have forecast North Korea's demise for years and predict its eventual collapse. Victor Cha, for example, claims North Korean survival to be merely an "accident of history" (Cha V. , 2012).¹⁴² However, its resilience cannot be understated. Alternatively, North Korean leaders may reflect a shrewdness to navigate their political hand. A more careful understanding of North Korea and its leaders is, therefore, an essential component in exploring effects of a deterrence strategy oriented against it.

Regional Deterrence Situation

Japan's missile defenses exist to deter North Korean behavior, not only as defensive systems to protect Japan should deterrence fail. Japan is faced with both the threat of political coercion and threat of attack by North Korea. Japan's BMD is intended, in part, to deter North Korea from such political decisions. Japan might be attacked with North Korean ballistic missiles as part of a broader conflict involving the United States since the U.S. defense of Korea involves the use of its forces staged at various locations in nearby Japan. As such, Japan's role in the defense of Korea has a high probability of either making it a target of North Korean coercion to refrain from supporting the U.S.

¹⁴¹ Page 190.

¹⁴² Page 430.

combat effort or, if it does, a physical target of armed ballistic missiles. The history since the end of the Cold War, however, is generally not related to crisis involving armed confrontation upon the Korean Peninsula. As a result, the principal coercive threat from North Korea toward Japan is for other regional security goals of the North Korean regime and for other political needs including financial gain. Threatening and provocative North Korean statements and behavior therefore, specifically oriented toward Japan, are the primary focus of Japan's deterrence strategy. Given North Korea's history of challenges to its sovereignty or outright defeat and occupation, it uses the long-range technology and destructive power offered with ballistic missiles to deter others from armed intervention in North Korea, but also as a visible instrument for political coercion of others.

Therefore, Japan's BMD is a logical choice of deterrence, especially as Japan becomes increasingly independent from the U.S. politically. Further, Sugio Takahashi states limited North Korean ballistic missile attacks or raids fall below the "threshold for retaliation" by the U.S. under extended deterrence conditions (Takahashi, *Ballistic Missile Defense in Japan: Deterrence and Military Transformation*, 2012).¹⁴³ What this means is that it will take many North Korean ballistic missiles to cross a threshold for war and U.S. retaliation as part of the U.S. extended deterrence security guarantee, placing Japan's BMD at the center of deterring North Korea in scenarios below such large-scale attacks including political coercion or limited missile attacks.

While Japan has its own security interests to consider, including its deterrence strategy against North Korea, the U.S. is also active in deterring North Korea. Key

¹⁴³ Page 23. Takahashi is with the National Institute for Defense Studies and also a Deputy Director of the Office of Strategic Planning in Japan's Ministry of Defense, both in Tokyo.

differences exist, however, and are summarized below to help bring further clarity to Japan's situation and the deterrence area of emphasis for the dissertation.

U.S.-North Korea Deterrence Situation

While the U.S. is generally concerned about North Korean provocations, the U.S. deterrence problem set is principally about deterring war on the peninsula. With North Korea's arsenal of ballistic missiles, the U.S. worries about their use in conflict. These missiles could, for example, target U.S. military force bases in Japan or ROK in order to drive a wedge between the U.S. and its allies (Perry, Davis, Schoff, & Yoshihara, 2004).¹⁴⁴ In wartime, such a wedge could be driven with North Korean use of WMD as a way to blackmail Japan from allowing the U.S. to use its territory, severely weakening the U.S. warfighting position (Kawashima, 2005).¹⁴⁵ Being dragged into conflict driven principally by the interests of the U.S. is precisely the type of "entrapment" scenario Japan fears (Sokolski, 2005).¹⁴⁶ The strike forces of the U.S. at bases in Japan may also serve to punish North Korea following a North Korean wartime attack on these bases. Japan's BMD could, therefore, provide the U.S. with a "damage limitation" capability for U.S. retaliatory forces (Takahashi, Ballistic Missile Defense in Japan: Deterrence and Military Transformation, 2012).¹⁴⁷ Thus, the deterrence challenge for the U.S. is a

¹⁴⁴ Pages 143-4.

¹⁴⁵ Pages 91 and 143.

¹⁴⁶ In his chapter, "Japan's Grand Strategy of the Korean Peninsula: Optimistic Realism." Page 237. According to Victor Cha, the U.S. and ROK forces have planned for war on the peninsula through Operational Plan 5027 since the early 1990s, a plan intended to fight North Korea on its territory and end its regime. Prepositioning of U.S. forces in Japan, Guam, and Hawaii is part of the defensive scheme. North Korea could threaten or actually attack Japan with 100 chemically-armed Nodong missiles, the purpose being delay of U.S. forces to the peninsula (Cha, 2012); pages 212 and 218.

¹⁴⁷ See pages 23-4. While Japan's BMD could limit damage to U.S. forces at bases in Japan, it would require a large North Korean ballistic missile raid to achieve. Further, the U.S. possesses other strike/retaliatory forces that could be brought to bear. Under wartime conditions, it does not appear the damage-limitation role of Japan's BMD for U.S. combat forces would be a decisive one and, therefore, may not be a significant factor in deterring war itself.

complex one. BMD may play a small deterrence role in this situation where the deterrence objective is to deter war—a task that exceeds BMD expectations—whereas the U.S. and ROK provide extensive conventional forces and the U.S. its nuclear weapons punitive capacity to deter North Korean aggression.

Japan-North Korea Deterrence Situation

Japan's deterrence problem is principally against North Korean behavior short of the wartime scenario sketch above. Japan's situation is better categorized as a "general deterrence" (status quo) or possibly an "immediate deterrence" (crisis) situation. Japan's missile defenses deter in this situation by having influence over North Korean behavior. This is the area of the dissertation's focus.

Japan's deterrence strategy does not use BMD exclusively, however, and includes the "carrot" of deterrence through cooperative engagement with North Korea. Engagement, through use of food, energy, and compensation-based financial inducements, seeks to attract North Korea to better behavior. Japan seeks to deter North Korean behavior by disincentivizing it with its combined capacity of national power, including its BMD that is also used as a safety net. While Japan is unable to threaten punishment of North Korea with offensive kinetic military power, Japan is uneasy about any aggressive U.S. posture as it could trigger conflict (scenario above) and North Korean attacks on Japan (Perry, Davis, Schoff, & Yoshihara, 2004).¹⁴⁸

By the time Japan fielded its first operationally deployed BMD assets in 2007, intellectual work was also underway to further Japan's deterrence-related strategy vis-à-vis BMD. For example, a Japan Institute of International Affairs report reviewed the development of deterrence, and the role of missile defenses, conceptually in the U.S.,

¹⁴⁸ Pages 144-6.

arguing Japan's thinking followed that of the United States. They cited, for example, the 2004 version of the U.S. Defense Department's deterrence concept document, drafted by U.S. Strategic Command, in Omaha, Nebraska, in the development of Japan's thinking on deterrence—a source of foundational conceptual thinking applied in the dissertation (Kaneda, Tajima, Kobayashi, & Tosaki, 2007).¹⁴⁹ The authors feared key U.S. conventional capabilities, such as carrier battle groups, could redeploy out of Northeast Asia, as has happened in the past. The JIIA report also reflected on the 2006 North Korean ballistic missile tests, suggesting diplomacy may have been more effective had Japan had deterrence-capable BMD deployed, which it did not at that time. The report's authors also argued BMD meant Japan will not need to “surrender” to such intimidation, arguing BMD carries significant emotive meaning to Japan given the strains of unconditional surrender at the termination of World War II. More robust BMD capabilities, they argued, would deter more effectively North Korean “reckless behavior” and forms of political intimidation (Kaneda, Tajima, Kobayashi, & Tosaki, 2007).¹⁵⁰

Some argue North Korean behavior toward Japan reflects more of coercion rather than threats to attack and wage general war—to get something from Japan, such as aid, reparations, or opposition to U.S. basing access, without military attacks. Part of Japan's

¹⁴⁹ The dissertation reflects more on the 2006 version, the DO JOC, though the basic conceptual tenets of deterrence of both documents are the same. As the authors of the JIIA report developed the thinking of deterrence in Japan, they included the following essential discussion points: technology is critical, including both the nature of the threat and defenses brought to bear to deter and defend against that threat; Japan relies on the U.S. extended deterrence guarantee for nuclear threats to Japan, inferring conventional and non-nuclear WMD threats fall principally to Japan to deter; BMD primarily delivers deterrence by denial by restraining the political and military advantages sought by the enemy through actual or threatened ballistic missile attacks; BMD also deters and makes an enemy more cautious by complicating an enemy's “strategic calculation” by increasing uncertainties he will achieve his goals or objectives; BMD restrains an enemy from deploying greater numbers of ballistic missiles and from proliferating them to other countries; deterrence will be further enhanced by successful BMD tests and exercises; passive defenses also provide benefit-denial deterrence; and, BMD provides Japan's leadership rational decision-making even in crisis. See pages 137-9.

¹⁵⁰ Pages 44-50 and 140-1.

task, therefore, would be to deter North Korean coercion, particularly through use of its ballistic missiles.¹⁵¹ As such, Japan is interested in deterring North Korean ballistic missile tests, or at least those that threaten Japan's population given sensitivities to aerial attacks from the past and the surprise overflight in 1998. However, the backdrop of U.S. nuclear weapons providing extended deterrence of North Korea for Japan has shown its limits. Just as the U.S. threatening massive nuclear retaliation against small threats proved to lack credibility in the Cold War, so, too, U.S. nuclear threats do not avail themselves for deterring provocative North Korean behavior such as missile tests.

According to Victor Cha, the U.S. views North Korean ballistic missile development and tests as woeful U.S. deterrence failures stating in 2012, "The United States has failed for over twenty years to deter DPRK development and testing of its ballistic missiles" (Cha V. , 2012).¹⁵² This fact, and the ability of North Korea's shorter-range ballistic missiles to strike Japan free from being intercepted by the U.S. national system has shaped Japan's thinking of its deterrence situation and the value of its own BMD to devalue North Korean ballistic missiles and deter their behavior. In Japan, where even test missiles can fly over and endanger civilians, change of North Korean ballistic missile launch and testing patterns might be viewed with relief and guarded optimism of deterrence success, such as the change in flight profile in the North Korean 2009 Taepodong missile test.

Japan's development and heavy investment in BMD suggests it is a primary instrument in

¹⁵¹ North Korea's ballistic missile tests and overflight of Japan could be considered "coercive diplomacy," essentially backing a political demand with the threat of punishment for noncompliance. For example, prior to the Japanese attack on Pearl Harbor the U.S. attempted to deter Japanese aggression through the threat of an oil embargo and military intervention. The U.S. decided to maintain the naval fleet in Pearl Harbor as a signal of U.S. resolve. Later, it chose to move from deterring aggression to coercing Japan to remove its military forces from China with the same threats, although the U.S. policy became a de facto embargo by way of internal administrative mishandlings (George & Simons, *The Limits of Coercive Diplomacy*, 1994); pages 2, 58-71. In this way, a ballistic missile test communicates a threat of punishment for noncompliance.

¹⁵² Pages 223-4.

such a deterrence strategy, not only serving to deter ballistic missile attacks in support of U.S. war plans against North Korea for peninsular-wide scenarios, but more practically against North Korean flight profiles that instill societal fear, and doing so without dependence on the U.S. or violation of Japan's constitution. Deterring ballistic missile-related behavior denies North Korea its principle tool of coercion and could, therefore, have a constraining effect on other behavior toward Japan.

CHAPTER THREE: LITERATURE REVIEW

Deterrence Theory and Missile Defenses

Deterrence retains a few core concepts but has, especially in the post-Cold War era, experienced development of thought. Described by some as “waves” of thought, scholars of modern deterrence thinking have sought to adapt deterrence to meet a variety of security challenges and new technologies and capabilities including BMD. Considered an influence-oriented activity, deterrence can occur in peacetime and crisis (referred to as “general” and “immediate” deterrence, respectively) and in conflict. Political leaders can devise deterrence strategies using all of the instruments of power at their disposal. Taken from the context of the Cold War bipolar security context, deterrence has moved for many theorists from strictly a nuclear threat deterred by other nuclear capabilities to: conventional, nuclear, and cyber threats, for example; provocation to coerce; and technical acquisition such as Iran pursuing a nuclear weapons program.

Further, deterrence is no longer isolated to cost-imposition, but can be accomplished in other ways of influence, including benefit-denial and affecting an adversary’s perceptions of *not* acting, or the costs and benefits of restraint (the latter term is also dubbed the “carrot” of deterrence, as opposed to the “stick” of traditional cost-imposition). The means of deterrence have not only moved beyond nuclear weapons but can include other military capabilities such as cyber, BMD, space, and reconnaissance, and non-military instruments such as diplomacy, financial sanctions on banks, trade restrictions, and law enforcement. Another departure from Cold War practices is the move from simple counting rules, comparing numbers of various forces and assuming parity was stable, or just a little more than the opponent was even better for deterrence. In

place of numeric comparisons, emphasis shifted to qualitative and psychological understanding of the adversary. BMD in the Cold War was considered for its deterrent value, but national systems were questionably effective, costly, and more political baggage than they were worth. President Reagan's grandiose vision in the 1980s of defenses making nuclear weapons obsolete, and regional threats, such as Iraq in the early 1990s, changed many views on deterrence and BMD's contribution to it.¹⁵³ While it is difficult to establish with precision, Japan's views on deterrence also evolved: echoes of deterrence were voiced periodically by its leaders and today its official positions reflect modern adaptations found in U.S. literature. For Japan to view BMD as a central component of its deterrence strategy is a direct reflection of the knitting together of modern military capabilities with modern deterrence thought.¹⁵⁴

¹⁵³ Not everyone has made the intellectual jump from BMD defending to BMD deterring, however. Aaron Karp also reflects the idea that deterrence has transformed to a greater emphasis upon defenses and now the two exist as parallel concepts. Deterrence has declined because nuclear confrontation between traditional Cold War rivals has declined. Conventional conflict and terrorism have overtaken the international security landscape, making missile defenses of value for warfighting in regional scenarios only. National missile defenses in the U.S. defending against nuclear attack by Russia or China does not make sense (Karp, 2004); pages 72-5 and 81. While Karp's description of the decades-long transformation from Cold War deterrence to an increasingly dominant international security framework of defenses helps place Japan's missile defense program into a larger international security context (and one emphasizing threats from regional actors like North Korea), like some others he does not address any conceptual or practical relevance of missile defenses to deterrence. For example, if missile defenses contribute to regional warfighting capabilities, does this not have any effect on regional stability or deterring regional conflict?

¹⁵⁴ Navigating terminology within the "deterrence" lexicon is challenging, especially when seeking clarity on the simple question of whether BMD deters or simply an enabler for the "real" instrument of deterrence—nuclear weapons—to work. For example, in a timely revisit of his 1966 classic, *Arms and Influence*, Thomas Schelling draws distinction between defense and deterrent defense. The difference, he suggests, is the intent of the action. For example, "pure defense" is in play if the intent of the defender is to block or resist the adversary such that he cannot succeed in his plan. However, "deterrent defense" is purposefully inducing the adversary from proceeding at all (Schelling, 2008); pages 78-9. Japan's BMD, therefore, can be considered both pure defense, in the sense of simply working to save lives under ballistic missile attack, and deterrent defense as they are also intentioned to sway North Korean leaders from making the decision to use ballistic missiles in the first place, or from other aberrant or unwanted behavior that could escalate somehow.

As a strategy generally, deterrence is a component of one's national security. In execution, deterrence cuts across many lanes and is especially woven into the fabric of foreign policy. For example, the U.S. seeks to gain foreign basing access at various locations throughout the world in order to deter specific regional threats. It could take years of diplomatic negotiation to accomplish, and may entail other U.S. political or economic commitments. Deterrence could not be accomplished, however, without the intertwining of national security and foreign policies. Theoretically, deterrence compliments other international relations streams or activities, crossing events of history no less than other political science or IR emphases. For example, in the Cold War, deterrence was closely aligned with non-proliferation and arms control, including the 1972 Anti-Ballistic Missile (ABM) Treaty, ratified by the U.S. and USSR to help maintain stable deterrence without an offensive arms race. Deterrence is also related to peace and conflict studies, alliances and interdependence, political psychology, and constructivism. But if deterrence has conceptually expanded one would expect wide revision in other international relations theoretical approaches or policy applications.¹⁵⁵

In total, the dissertation research has identified over 50 theoretic arguments of how BMD can support or undermine deterrence. This represents the largest list of such arguments consolidated that could be found. Some of these are conceptual ideas, others from an analysis of a specific historical event. As such, it can be difficult to judge which theoretic view applies to any one deterrence situation. Such a large number of perspectives can also create theoretic and policy confusion in the expectations of missile defenses to deter.

¹⁵⁵ Two recent examples are the theoretic and policy struggle to deter terrorists or deterring in and through cyberspace.

As a strategy, deterrence has existed since ancient times. It is essentially about one party influencing another from doing something the first wants to avoid or finds harmful. Deterrence operates in the legal domain, such as a community deterring criminal behavior through use of its law enforcement capabilities and creation of prison sentences for prosecuted criminals. At the interstate level, deterrence works through various levers of national power to influence an adversary's thought processes and calculations of actions under consideration. Various threats of punishment or means to deny the adversary perceived benefits of such action are useful deterrence tools. In recent years, ballistic missiles emerged both as an instrument to threaten by an adversary and to deter by the threatened. Likewise, defensive capabilities against ballistic missile threats also grew in prominence, both in consonance with the threat and as needed technological hurdles were crossed enabling ballistic missile defense to be cost-effective and credible. Most theorists and practitioners agree missile defenses are an important new military capability, though disagreement exists as to their efficacy as a tool of deterrence.

In exploring the concept of deterrence and the contributions of missile defenses historically, much is to be gleaned from the literature as it relates to the U.S. experience. For example, many of the fundamental ideas of deterrence relied upon today have their origins in the Cold War period. So, too, were some of the central arguments of the roles and deterrent effects of missile defenses. No value is lost with respect to the applicability of these deterrence concepts to Japan and its use of missile defenses as a deterrent tool against North Korea since Japanese thinking on deterrence tends to be similar to that of the United States. However, while deterrence thought has developed in many ways from its early beginning, there remain several gaps germane to the Japan-North Korea case.

For example, little is written dealing with Japan-North Korea relations generally and empirical data is lacking with respect to the deterrent role of Japan's missile defense capabilities toward North Korea. Further, little is addressed empirically as to the deterrent role of missile defenses in status quo (non-wartime) conditions or how the development of a missile defense capability over a long period of time, as Japan has done, contributes to deterrence. Additionally, the pros and cons of missile defense contributions to deterrence are widely scattered—no single compilation can be found from which theoretic or empirical case study analyses can be based. These and other gaps will be highlighted throughout this chapter. The dissertation will address some of these empirical gaps.

Deterrence theories have ranged from a simple proposition of having more forces than one's opponent, on the one hand, to the great difficulty understanding adversary psychology or how deterrence works on the other. Questions were raised about why deterrence had failed in many cases and pointed to the need to better understand one's adversary including cultural and psychological factors that inform his national security decision-making. Analyses, plans, and policy ebbed, too, including how deterrence was addressed between the U.S. and regional allies. As missile defenses rose in prominence to address regional threats increasingly armed with greater numbers and more lethal offensive ballistic missiles, so, too, did debate in the U.S. about how missile defenses contribute to, or undermine, deterrence of those threats—over 50 arguments, some contradictory, have been identified in the research of the dissertation and are captured in Table 1 at the end of this chapter. All of these developments were highly relevant as U.S. allies, including Japan, considered partnering with the U.S. in such enterprises or

embarking on missile defense programs of their own. Dependent, in part, upon the U.S. for its security, Japan has also looked to the U.S. experience to inform its own thinking on deterrence concepts and the special role of missile defenses for its own security. Such considerations are exceedingly relevant for a country no longer possessing formidable offensive military power, but who is nevertheless forced to confront a very near and present danger from North Korea.

The evolution of the missile defense-deterrence dynamic has provided important and revised concepts, including lessons learned from past historical deterrence failures or illuminations of historical events, valuable to Japanese decision-making with respect to its research, acquisition and deployment of its own ballistic missile defense (BMD) system. This chapter, therefore, will be divided into three parts: the development of deterrence theory, including the importance of the Cold War period as well as understanding deterrence theoretic development through “waves” of thought; modern features and ideas of deterrence, including the role of regional actors, general vs. immediate deterrence conditions, deterrence tailoring, improved adversary understanding, and use of various capabilities to influence; and, missile defenses, including the historical development of BMD, the technical characteristics of ballistic missiles and BMD, and the arguments for and against BMD in deterrence. Application of ideas described to the Japan-North Korea case, as well as theoretic gaps and shortfalls to that case, will be provided and summarized within the chapter’s three parts.

Deterrence Theoretic Development and Features

Historical Evolution

The Cold War Period.

According to a recent U.S. Department of Defense report, “deterrence operations” are defined as “integrated, systematic efforts to exercise decisive influence over adversaries’ decision-making calculus in peacetime, crisis, and war to achieve deterrence” (U.S. Department of Defense, 2009).¹⁵⁶ Today, the Japanese perspective is similar. Such a broad definition reflects decades of theoretic evolution and debate, with Cold War era deterrence serving as the point of departure, at least for most theorists.

In a prominent theoretic study nearly four decades ago, Alexander George and Richard Smoke provided important background on the development of deterrence thinking and conceptual ideas for its application. Considered an influence type of activity, deterrence was present conceptually in early writings such as Thucydides, Machiavelli, and others in the 18th and 19th centuries, though an important distinction for political leaders in those days was that deterrers had the capability to threaten harm only after they defeated their opponent’s military forces. Technology, however, changed this dynamic. With the advent of strategic bombing in World War II and later, nuclear weapons, deterrence was able to be conceived as a separate strategy since it was possible to threaten grave national consequences without defeating the opponent’s armies first. For the U.S., it was not until the 1950s that any coherent deterrence strategy emerged (George & Smoke, *Deterrence in American Foreign Policy: Theory and Practice*, 1974).¹⁵⁷ While there is empirical evidence technology advanced deterrence thinking considerably, it fails to address Japan’s current situation in which it needs to deter North Korea without offensive military arms. The term “deterrence,” according to Dougherty

¹⁵⁶ Page 5.

¹⁵⁷ Pages 1, 21.

and Pfaltzgraff, “did not appear in the literature of international relations or strategic theory prior to World War II” (Dougherty & Pfaltzgraff, 2001).¹⁵⁸

George and Smoke described deterrence as a relational process of influence by one over another, but confined deterrence to threats of punishment, and in the modern era, emphasized nuclear weapons in context of nuclear scenarios between nuclear-armed states (George & Smoke, *Deterrence in American Foreign Policy: Theory and Practice*, 1974).¹⁵⁹ The North Korea-Japan case in the dissertation lies beyond the types of deterrence cases presented by George and Smoke, reflecting just how much of the modern era theoretic development, policy, and concomitant literature on deterrence originated in the post-war period of relations between the U.S. and the Union of Soviet Socialist Republics (USSR) and how regional situations like the Japan-North Korea case were simply ignored.

In his early volume on national security strategy (first published in 1959), Bernard Brodie provided a classic perspective on deterrence and described components of early deterrence thinking, many of which remain operative, or are at least debated, today. For example, given the nuclear circumstances with the USSR, he presented three broad approaches to U.S. national security, including preventive war, preemptive attack, and massive retaliation (Brodie, *Strategy in the Missile Age*, 1965).¹⁶⁰ The credibility of massive retaliation deterrence relied upon an overwhelming, “embarrassing” amount of

¹⁵⁸ Pages 344-5.

¹⁵⁹ Pages 38-9, 48-9, and 102.

¹⁶⁰ Pages 223-63. The term “massive retaliation” was coined by Secretary of State John Foster Dulles in 1954 in which those offensive nuclear forces responsible for retaliating to nuclear attack would form the backbone of U.S. deterrence in part because there was, at that time, “little alternative.” Pages 248 and 252.

power with one's nuclear weapons, though conventional forces could provide a deterrence "signaling" role (Brodie, *Strategy in the Missile Age*, 1965).¹⁶¹

By the mid-to-late 1950s, however, the U.S. was faced with other security choices, impacted in part by military technologies. These options included: deterrence; war-winning; and defense (Yanarella, *The Missile Defense Controversy: Strategy, Technology, and Politics, 1955-1972*, 1977).¹⁶² While active and passive defenses could save lives and provide protection of various points of high value, missile defenses could specifically enhance deterrence by limiting damage to U.S. offensive forces (Yanarella, *The Missile Defense Controversy: Strategy, Technology, and Politics, 1955-1972*, 1977).¹⁶³ As technology improved and as the numbers of nuclear weapons and delivery systems increased on both sides, the only core change in the deterrence equation, at least on the U.S. side, was a move from the idea of mutual vulnerability to each other in a first-strike scenario, to mutual *invulnerability* to a first strike (Adams, 1971).¹⁶⁴

As if to acknowledge mutual unease of the destabilizing effects of ballistic missile defenses upon deterrence, however, the U.S. and USSR agreed to two simultaneous arms

¹⁶¹ Pages 253 and 273. Brodie also suggested, as others did, the decision-makers of governments were rational people possessing widely varying temperaments though, under extreme circumstances, can make unreasonable choices and may in fact make most decisions out of intuition without careful weighing of objective facts. In this regard he argued effective deterrence was based upon a "subjective feeling" in the adversary's mind. Pages 277-80 and 397-9.

¹⁶² Page 50.

¹⁶³ Page 51. The preeminent view in the U.S. remained that deterrence through assured destruction could and must be accomplished by more and more capable offensive weapon systems. See pages 76-7.

¹⁶⁴ Pages 169-70. First strike invulnerability was made possible due to the hardening of intercontinental ballistic missile (ICBM) silos, survivability of at-sea submarine launched ballistic missiles (SLBMs) on submarines, and warning and readiness of manned bombers. This meant both sides were actually assured destruction if either initiated a nuclear war due to the certainty of facing a large nuclear second strike in retaliation. Beliefs and perceptions coupled with actual estimates of nuclear forces of the opponent were central to achieving deterrence and so long as the forces of both sides were comparable in overall balance, a stable psychological or cognitive environment would exist among leaders on both sides, thus deterrence would remain operative. Also, in the most active period of research, development and deployment (1959-1969), a review of literature on the policy debate was overwhelmingly against U.S. BMD. See page 247.

control agreements in 1972, only a few years after the U.S. deployed the SAFEGUARD BMD system. This was effectively a “closing off of the defensive realm” to afford assured destruction to retain centrality in deterring nuclear conflict (Yanarella, *The Missile Defense Controversy: Strategy, Technology, and Politics, 1955-1972*, 1977).¹⁶⁵ Later, it became apparent that U.S. thinkers had engaged in “mirror-imaging” of the Soviet Union, assuming (falsely) they were attracted to a mutual goal of stability. In reality, the USSR was pursuing a nuclear war-fighting capability marked by a mix of offensive and defensive systems, including active ballistic missile defenses (Goure, Hyland, & Gray, 1979).¹⁶⁶ Pursuit of extensive damage-limitation capabilities indicated MAD was no longer “mutual” (Goure, Hyland, & Gray, 1979).¹⁶⁷

The U.S. in the 1980s considered three basic strategy alternatives: retaliation only; prevailing or warfighting; and a defense-dominant approach (Office of Technology

¹⁶⁵ These treaties were the Strategic Arms Limitations Talks (SALT I, limiting offensive nuclear arms) and the Anti-Ballistic Missile (ABM) Treaty. Pages 185-6. Robert McNamara, following his decision to recommend deployment of a U.S. BMD system in the 1960s, argued missile defenses not only could deter the minimal Chinese threat but discourage other consequences, such as nuclear proliferation by other states—his central argument for favoring missile defenses. Ironically, when a robust U.S. BMD system began deployment, significant diplomatic efforts at both offensive and defensive (BMD) arms control between the U.S. and Soviet Union emerged, with many claiming U.S. operational deployment of BMD playing a positive role in the U.S.-Soviet political relationship generally and the stabilizing of the overall strategic deterrent relationship. This is an important prospect in the dissertation since stable relations in the Japan-North Korea case generally are, likewise, used as a benchmark for the deterrence relationship as described above in the U.S.-USSR case.

¹⁶⁶ Page v. War-fighting capability, argued Gouré, not only included offensive counterforce capabilities, domination at war’s end, and ability to recover, but active and passive defenses. Further, the reason the Soviets agreed to the ABM Treaty was not because they accepted the MAD concept for their security but because they saw, at the time of the treaty’s debate, U.S. superiority in defenses—something the USSR saw as integral to a successful war-fighting strategy. Having stopped U.S. missile defense deployment and technological research, the Soviets began their own process of catching up and speeding by the U.S. in critical deterrence capabilities, including missile defenses. See pages vi and viii-ix. Further, Soviet military officers described features of their strategy and the rising role of defenses, including missile defense, civil defense, and protective measures such as offensive force mobility. The Soviets were also pursuing other BMD technologies, such as lasers and charged-particle beam systems. These capabilities would present benefits over use of ballistic missiles for defense, including: faster response time against incoming warheads; radars used in BMD would not be blinded by the effects of nuclear-armed ABM missiles; and, there would be unlimited capacity to shoot at incoming warheads. Page 24

¹⁶⁷ Page 20.

Assessment, 1986).¹⁶⁸ Proponents of a defense-dominant strategy viewed missile defenses increasingly as providing clear deterrence value by making an adversary's objective more difficult by protecting at least some of his intended targets and by making his planning more uncertain by denying him knowledge of how many, and precisely which, warheads will get through (Office of Technology Assessment, 1986).¹⁶⁹ For the USSR, defenses were to help them absorb any first blow by the U.S., providing the Soviets valuable time and decision space before proceeding in conflict (Goure, Hyland, & Gray, 1979).¹⁷⁰ Despite U.S. fears that Soviet BMD and other war-fighting technologies presented it first-strike capabilities, Hyland argued Soviet military leaders had for years suggested BMD provided both sides deterrence value (Goure, Hyland, & Gray, 1979).¹⁷¹ As in the U.S.-Soviet case, little empirical study exists on North Korean leader thinking with respect to deterrence generally or to how a regional actor's BMD might deter North Korea.

As relations with the Soviet Union began to stabilize around more pragmatic, less ideological, factors, reconsideration was given by some in the U.S. of the value of BMD to enhance deterrence (Starsman, 1981).¹⁷² This discussion moved to the fore under

¹⁶⁸ Page 83.

¹⁶⁹ Pages 86-7.

¹⁷⁰ Page 31. This advantage, with active missile defenses at the center, was comparable to Soviet strategy in World War II in which it traded territory temporarily for time to regroup against German attacks.

¹⁷¹ Pages 31-2. In 1964, for example, Soviet General Talensky published an article claiming active defenses helped provide "balance" since they added to the options one side could pursue to compensate for any advantage by the other. Talensky also remarked such defensive systems maximized deterrence by placing such capabilities into your own hands rather than relying on the goodwill of the other side to restrain.

¹⁷² Page 2. For example, Colonel Raymond E. Starsman, in a study at the National Defense University, suggested BMD could make the new MX (later called Peacekeeper) ICBM more survivable. He argued that the ABM Treaty forced U.S. planners to focus attention on offensive systems, particularly their modernization and basing options. This was reflected, in part, in U.S. research and development (R&D) funding on BMD over 25 years. Starsman showed that BMD funding rose rapidly from the early 1950s, peaked in the late 1960s, and continued a rapid decline through the ABM signing period and bottomed out around \$.3M per year in the late 1970s through 1980. The central technological feature of offensive

President Ronald Reagan when he revealed his Strategic Defense Initiative (SDI) in 1983, providing a broad vision of redefining deterrence in national security through use of defenses. The vision of SDI relatively quickly succumbed to technical limitations, however, and more modest thoughts of the emerging role of missile defenses (Binnendijk, 1986).¹⁷³ Nevertheless, U.S. strategic doctrine was in transition from an offense-oriented to a defense-oriented doctrine.¹⁷⁴ The period following SDI's start forced many new studies and reevaluations to provide U.S. leadership more options than massive retaliation or surrender (Binnendijk, 1986).¹⁷⁵ It was feared by some in the U.S. that the transition period from a deterrence strategy based on retaliation to a defense-dominant one would be risky (Office of Technology Assessment, 1986).¹⁷⁶ Another significant shift in thinking about BMD, however, occurred at the end of the Cold War, particularly in the period surrounding the Gulf War in 1991. Deterrence strategy increasingly focused on regional and operational threats (Payne K. B., *Missile Defense in the 21st Century: Protection against Limited Threats*, 1991).¹⁷⁷ Despite this new and profound shift in attention to regional threats, including North Korea, and the rising role of BMD, no empirical studies examined implications of regional BMD, such as Japan's early program, for deterring North Korea.

forces driving current thinking was MIRV capability, providing great offensive prowess and reducing ABM value except for the most robust and technically superior missile defense systems. Page 4.

¹⁷³ Page 5. There were, however, benefits of newer SDI technologies, including the fact BMD no longer required use of a nuclear warhead atop the interceptor and BMD could successfully deal with the problem of attacking MIRVs. See pages 11-2.

¹⁷⁴ Page 17. This transition was also reflected in political-military strategy games and operational wargames.

¹⁷⁵ Pages 78-9. This led to the concept of "escalation control" and emphasis upon a U.S. nuclear reserve force. Critical to these studies, according to Sloss, was the emergence of the U.S. countervailing strategy which sought once again to find the proper mix of offenses and defenses to deter and hedge against deterrence failure.

¹⁷⁶ Page 113.

¹⁷⁷ Pages 4-7.

Schools of Thought, “Waves” of Theory, Models Employed.

In addition to the historical approach, another method of exploring the development of deterrence thought—and its relevance and relationship to BMD—is through the broad schools of thought, or periods of thinking on the subject. Robert Jervis and others have described the theoretical development of deterrence over time in terms of “waves” of ideas expressed by various scholars. The first wave grew following World War II and spoke of the immense implications of the advent of nuclear weapons upon international relations and realist thought. Bernard Brodie was a leader among first wave scholars (Jervis, *Deterrence Theory Revisited*, 1979).¹⁷⁸ More systemization was applied in the second wave by Brodie, Thomas Schelling, Glenn Snyder, Roberta Wohlstetter and others. Like the first wave, the second wave was also framed by the need to address the nuclear confrontation between the U.S. and Soviet Union. Use of games was common, though perhaps in an over-simplistic manner. Another feature, and source of criticism, was the overestimation of objective, benefit-maximizing, utility oriented rationality in leader decision-making through development and use of the rational actor model (Jervis, *Deterrence Theory Revisited*, 1979).¹⁷⁹

The “classic model” of decision theory in international relations, with its roots in the Enlightenment period, is the rational actor model (RAM) used extensively in first and second wave literature. The RAM presumes a decision-maker calculates based upon objective consideration of the utility and probability of alternatives and chooses the option that maximizes expected utility given a value-based rank-ordering of his

¹⁷⁸ Pages 291-2.

¹⁷⁹ Pages 291-300.

preferences (Allison, 1971).¹⁸⁰ Many early, predominantly realist, theorists, such as Morgenthau, Schelling, Kennan, Waltz, Kissinger, and Bueno de Mesquita used the classical model. Several theoretic problems with the rational actor model have arisen, however, as others in later waves explore other empirical cases or approaches. For example, RAM, and other game-theoretic approaches, such as the Prisoner's Dilemma or Chicken, always relies on the element of retaliation in the formal deterrence model (Langlois, 1989).¹⁸¹ This is a considerable gap for the Japan-North Korea case. Japan, for example, does not possess an offensive, retaliatory, and especially nuclear-armed capability and the value of such games for insights in this particular case appear very limited. Further, while the RAM can provide some insights into "tacit" and diplomatic bargaining (Dougherty & Pfaltzgraff, 2001),¹⁸² game-theoretic deterrence models, however, are admittedly not representative of reality in international relations (Franck & Melese, *The Access Deterrence Scenario: A New Approach to Assessing National Missile Defenses*, 2002).¹⁸³

Another problem is that the rational actor model avoided incorporation of qualifying features from constructivist or psychological theories. Herbert Simon offered the idea of "bounded rationality" and "satisficing" decisions that are good enough and reached without complex matrices of all conceivable decision factors (Dougherty &

¹⁸⁰ Pages 10 and 35. In his examination of the key decisions involved in the 1962 Cuban Missile Crisis, Graham Allison introduced the model as the "classical" approach to understanding calculations and decisions of leaders. This model focused upon the choices made by U.S. and Soviet senior leaders and assumed they rationally maximize values in their choice. He compared this model to an Organizational Process Model, which focused on routines and outputs of organizations, and a Governmental/Bureaucratic Politics Model, which looked at the politics involved, to offer insights to the crisis. Pages 245-56.

¹⁸¹ Page 67. See also *Exploring the Stability of Deterrence*, edited by Jacek Kugler and Frank Zagare (Kugler & Zagare, 1987), though their approach, like many others, emphasized the U.S.-USSR stability problem and retained common game-theoretic assumptions.

¹⁸² Pages 562-70.

¹⁸³ Pages 234-6.

Pfaltzgraff, 2001).¹⁸⁴ Many theorists since the early 1990s have stressed the need to take a more eclectic conceptual approach. As Alex Mintz suggested, national security related decisions were “best explained as the amalgam of a mixture of theories” that capture personal, environmental, and social or cultural identity factors (Dougherty & Pfaltzgraff, 2001).¹⁸⁵ This is the dissertation’s approach; as such, application of simple rational actor modeling to the Japan-North Korea case is of little value.

The third wave stressed theoretic development of deterrence along the lines of psychological factors and risk-taking in decision-making. Third wave deterrence theorists explored more fully the decision calculus elements of leaders, including the probability estimates of perceived consequences of their choices, but Jervis argues more was needed in this area, too, to understand how leaders actually employed probabilities. For example, their estimates tend not to be made with the precision suggested by formal theory. Additionally, third wave deterrence explored the idea of commitment, suggesting leaders “generally place a greater value on keeping what they have than on making further gains.” Finally, third wave deterrence began to explore the role of a leader’s political goals in his decision-making more fully. An adversary’s reason for initiating movement from status quo to crisis or conflict mattered immensely, but was not addressed with vigor before third wave deterrence (Jervis, *Deterrence Theory Revisited*, 1979).¹⁸⁶

Constructivist theory’s contribution to decision-making and broader decision-making theory played a central role as deterrence thinking expanded in the third wave. Constructivism, for example, suggests leaders’ perceptions of various components of the

¹⁸⁴ Pages 560-2. The authors make the point that the assumption of rational choice continues to be prevalent in international relations (state-level) theory, but not necessarily decision-making (individual-level) theory.

¹⁸⁵ Page 571-4 and 599.

¹⁸⁶ Pages 301-11, 318, and 322.

external and internal environment around them, such as technology, resources, and social demography, influence their decision-making, sometimes creating bad decisions due to informational gaps in the environment or erroneous interpretations of environmental activity or change. Alexander Wendt, Robert Keohane and others argued that the national interests of a state were socially constructed from the identity, values, norms, and culture of the state's people (Dougherty & Pfaltzgraff, 2001).¹⁸⁷ But these ideas did not generate a significant series of study on North Korea and how these factors inform their deterrence-related decision-making with respect to Japan, where historical interactions clearly resonate in North Korean culture. The dissertation, through use of the strategic profile, will seek to address this gap.

Robert Jervis stressed the need to approach deterrence from a psychological perspective, or at least to unpack an opponent's psychological factors as part of an approach to deterrence. As part of the third wave of thinking, he suggested that "deductive logic," the premise of rational choice modeling, ran contrary to reality and history in many cases since opponents in international relations rarely have a good understanding of the other (Jervis, Lebow, & Stein, *Psychology and Deterrence*, 1989).¹⁸⁸ Perceptions can skew reality (Jervis, *Perception and Misperception in International Politics*, 1976).¹⁸⁹ In analyzing the decision-making leading to crisis and World War I, Jack Levy, for example, suggested key psychological factors may have contributed to the outcome of war (Levy, 1986).¹⁹⁰ While the North Korean leadership resides in a closed

¹⁸⁷ Pages 164-7.

¹⁸⁸ Page 1.

¹⁸⁹ Pages 3-4 and 8.

¹⁹⁰ Pages 212-4. These included a rigid commitment to one's long-standing military plan or national policy, stemming perhaps from leader insecurities, uncertainties, or value conflicts under stress. In general, this

society, and fidelity of the psychological factors of its leadership lacking, the dissertation will seek to address these factors where possible and related to Japan's BMD.

Jeffrey Knopf describes a "fourth wave" of deterrence theoretic and conceptual focus that aims to better understand deterrence with respect to regional actors and non-state actors. Fourth wave deterrence is influence-oriented, includes non-punitive and communicative measures, and inclusion of empirical research (Knopf, 2010).¹⁹¹

However, he does not provide any analysis of the role or utility of BMD in deterring regional actors such as North Korea. Knopf also suggested clarity in deterrence tailoring by adding deterrence objectives to adversary understanding and use of leadership profiles (Knopf, 2010).¹⁹² It is, however, difficult to imagine any tailored deterrence strategy that does not include both elements.

In general, there is very little quantitative academic literature on North Korean behavior, especially in its foreign policy over an extended period, and none solely on the North Korea-Japan relationship. Also, very little deterrence literature involves Asia and most missile defense-deterrence literature addresses U.S. national missile defense issues and many of those relative to deterring nuclear war. Of all the academic literature sources reviewed on missile defense-deterrence, none of the cases were on the deterrence effect of Japan's missile defenses toward North Korea. Further, of all the specific arguments identified on whether missile defenses enhance or undermine deterrence (summarized in Table 1 at the end of this chapter) none of the arguments were based exclusively upon research of the Japan-North Korea case.

could lead to discounting new information that conflicts with one's existing policy, generating misperceptions and bad or irrational decisions.

¹⁹¹ Pages 2-4.

¹⁹² Pages 26-7.

Significant Features of Modern Deterrence

Emphasizing Regional Actors.

An important factor—particularly since the end of the Cold War period—is the emergence of regional states as new and significant threats to U.S. and allied security, an obvious point of interest for the dissertation. Keith Payne argued that the post-Cold War period would not be dominated by superpower confrontation but by regional powers, including North Korea, obtaining ballistic missile and WMD capabilities and, with these capabilities, seeking to deter the U.S. and then coerce others in the region with greater impunity. Stakes would be high for such regional powers making deterrence more challenging (Payne K. B., 1996).¹⁹³ These actors were less constrained from coercion and use of force, more risk-tolerant, lack effective communication with opponents, and, shared an asymmetry of stake where only their survival was at risk (Kartchner, 2002).¹⁹⁴ Regional actors were not, however, “suicidal” (Butler, 2001).¹⁹⁵ Key decisions were influenced by high motivation stemming from the attacker’s values or the psychology of its leader; misperceptions of consequences; or, perceived vulnerabilities in an opponent (Wolf B. , 1991).¹⁹⁶ Another characteristic of modern regional actors was the real threat they posed to civilians (Payne K. B., *Missile Defense in the 21st Century: Protection*

¹⁹³ Pages 30-5. Rear Admiral Richard Cobbold recognized Western powers were becoming “expeditionary” in their focus to address regional “rogue” threats (Ranger, 1998). See page 10. For the U.S., however, domestic tolerances for intervention were reducing over time, and despite a formidable nuclear force, deterrence of regional actors would be harder (Handberg, 2002). See pages 90-1.

¹⁹⁴ Pages 2-4.

¹⁹⁵ Page 112.

¹⁹⁶ Pages 5 and 17. All three of these, he argued, could be present in the emerging regional states such as North Korea and why he advocated for BMD. Missile defenses not only limit one’s vulnerabilities, but can defend and limit damage should deterrence fail. While Wolf’s emphasis was on U.S. defense against such a regional actor, it is reasonable to consider the three factors of North Korean decision-making to threats to Japan, not just the U.S., as well as the value of Japan’s BMD, not just that of the U.S., to deter and defend.

against Limited Threats, 1991).¹⁹⁷ While North Korea began to emerge as a significant concern for U.S. deterrence, no empirical research explored Japan's deterrent problem set vis-à-vis North Korea. Part of the reason is likely the continued focus by theorists upon deterring with punitive measures; BMD was viewed only in relation to those punitive measures. Having no military punitive capabilities, Japan was excluded from deterrence literature, despite its proximity to an immediate threat from North Korea.

Payne introduced the idea of placing emphasis upon what an adversary considers to be "reasonable" in his decision-making, based upon lessons of the Gulf War and dealing with Iraq's leader, Saddam Hussein. What was not understood, according to Payne, was that adversary behavior operates more upon what he believes to be "reasonable" given his own values, expectations, and goals (Payne K. B., *Missile Defense in the 21st Century: Protection against Limited Threats*, 1991). Regional actors were less well understood than the Soviet Union. As a result, deterrence against such actors may fail, increasing the value of missile defenses.¹⁹⁸ This should have driven deep

¹⁹⁷ Page 49. Payne, for example, argued that the threat to civilians seen by millions on television during the Gulf War transformed public views of ballistic missiles, even simple Scud missiles, in the hands of potential enemies. It also raised awareness of missile defenses as Patriot missile batteries engaged Iraqi Scuds. North Korea was not yet a dominant threat at the time of Payne's book. In Figure 8, North Korea does not appear on the list where U.S. BMD capabilities were compared to third party ballistic missile threats, such as those posed by Iraq and China. In this context, Payne reminded the reader of the ballistic missile threat in the 1962 Cuban missile crisis and how U.S. options were constrained under difficult time pressures, despite having conventional and nuclear superiority over the USSR. His implication was clear: possession of BMD could have provided time and options against such a missile threat. Pages 56-60.

¹⁹⁸ Pages 122-6. April Glaspie, former U.S. Ambassador to Iraq, suggested Iraq's invasion of Kuwait was due to in part to Saddam Hussein being "stupid" (p. 125). Understanding an adversary does not guarantee deterrence success but it does provide increased confidence in its effectiveness. Japan was not mentioned among the seven. Payne summarized key lessons of the Gulf War on the missile defense debate as follows: defenses do not need to be perfect to be useful; the ABM Treaty should not be considered sacrosanct; deterrence will not suffice against third parties with missiles; limited missile defenses are affordable; and, key U.S. allies will become increasingly supportive of missile defenses. On the latter point concerning allies, Payne cites seven states interested in Patriot missile defenses, for example. Pages 141-8.

study of regional actors, including North Korea, two decades ago, but there is little evidence of interest in doing so or empirical research based upon such study.

General vs. Immediate Deterrence.

In the early 1980s, Patrick Morgan separated deterrence problems conceptually into general and immediate deterrence categories. General deterrence deals with the purposeful managing of an existing adversarial relationship between two states, perhaps over considerable time. No crisis threats implying war was imminent are present and the situation could be considered stable, status quo, or relatively peaceful. Immediate deterrence, however, is when one of those states has transitioned from stable conditions into crisis by contemplating an attack and the other side is considering how to deal with the potential egregious action, including making threats of retaliation. This concept was examined later with a wide variety of studies by Paul Huth and Bruce Russett (Dougherty & Pfaltzgraff, 2001).¹⁹⁹ In his recent study, Stephen Quackenbush speaks of general deterrence as being much broader than transition to crisis-oriented immediate deterrence. General deterrence is regulatory and deals with “everyday decision making in somewhat conflictual or adversarial relationships” (Quackenbush, *Understanding General Deterrence: Theory and Application*, 2011).²⁰⁰ Quackenbush, however, does not explore North Korea or the Japan-North Korea case in his study. He also limits his study to a game-theoretic approach and does not conduct any in-depth qualitative case study material for any of the adversaries considered. These are significant gaps in understanding deterrence.

¹⁹⁹ Pages 372-3. Freedman further states that general deterrence is operative as the deterred chooses to respect the vital interests of the deterrer, creating a more stable relationship the longer this lasts. Political changes can, however, upset these conditions, creating instability between the actors and, if going unchecked in some way, crisis and immediate deterrence (Freedman, 2004). See page 42.

²⁰⁰ Page 4.

Military procurement activities, such as Japan's BMD, can be considered part of a general deterrence strategy. Patrick Morgan, for example, suggests "procurement of weapons systems" is one type of deterrence-related action in the strategic engagement between the deterrer and deterred as the latter assesses the overall strategic environment (Freedman, *General Deterrence and the Balance of Power*, 1989).²⁰¹ Japan's BMD can also be seen as a central component of a Japanese general deterrence strategy, while North Korea assesses Japan's BMD within the overall security environment. However, this critical detail has not been addressed in any significant general deterrence empirical research.

Assessing whether general deterrence is working is analytically challenging though an essential component of policy. When general deterrence is working, Colin Gray argued, "it is apt to leave a shortage of convincing evidence for the data mills of social scientists," a phenomenon "utterly beyond research" and "well out of sight." It is, nevertheless, "at work" in influencing the behavior of foreign political leaders in part through norms (Gray, *Maintaining Effective Deterrence*, 2003).²⁰² Gray acknowledges a critical gap but appears to resign assessment of general deterrence to the realm of

²⁰¹ Page 203. Colin Gray also speaks of capabilities, even intangible ones, such as the determination of a civilian population, as "strategic currency" used to achieve one's political and military ends (Gray, *War, Peace and International Relations: An Introduction to Strategic History*, 2007). Page 254. Japan's BMD, for example, could be viewed as such a "currency" in its relations with North Korea under general deterrence conditions.

²⁰² Pages 29-30. As the author has suggested in an edited volume, deterrence is a "competition of wills" between political leaders. Further, this competition need not wait until crisis to be operative. In keeping with the concept of general deterrence, deterrence operations include activities done in peacetime in a purposeful, dynamic, ongoing way to influence adversary leaders (Kamp & Yost, 2009). In the dissertation author's chapter entitled "Concepts for Deterrence Operations." Pages 197-9. From a different point of view, Handberg argued that deterring nuclear conflict in the Cold War was easy to conceptualize. However, as the level of potential conflict decreases, deterrence becomes more ambiguous and difficult to operationalize as a concept (Handberg, 2002). One can presume from his argument, therefore, deterrence of adversary behavior in general deterrence or crisis conditions is even more challenging. See page 105.

impossible. However, if this is the case, then adversary behavior that conforms with, or departs from, such norms can be a useful measure of general deterrence effectiveness.

The dissertation seeks to address this gap through use of the strategic profile and quantitative analysis to offer insights into the challenges of North Korean behavior under general deterrence conditions. This offers a unique approach to general deterrence and the possibility of a “norming” effect of Japan’s BMD in the Japan-North Korea case.

The challenge of assessing general deterrence could also be supplemented with other approaches to provide analytic insights. For example, using an approach similar to the dissertation, A. Cooper Drury and Stephen Quackenbush analyzed the impact of U.S. national missile defenses upon deterrence with three other states. They did this by examining the levels of dissatisfaction in their relations, assuming satisfaction reflected a stable deterrence relationship (Drury & Quackenbush, 2007).²⁰³ As a result, the dissertation will also consider the broader stability of Japan-North Korea relations as an indicator of the deterrence relationship. This is also a unique empirical approach to the Japan-North Korea case and will be done in the review of cooperative-conflictual interactions in the quantitative analysis chapter.

Japan’s general deterrence challenge can in some general ways be compared with the Israeli model, though violent interaction is the norm in Israeli experience. In describing the Israeli experience and evolution of its concept of deterrence, Thomas Rid suggested that deterrence was “restrictive,” and not absolute. This means that most deterrence relations, including the ones to which Israel is enjoined, do not anticipate

²⁰³ Pages 9 and 13-4. Further, their approach incorporated data from the IDEA dataset and measures of dissatisfaction reflecting WEIS indicators, aspects used in the dissertation’s quantitative analysis. Their findings, though not incorporating very much qualitative analysis, showed missile defenses, in these cases, had no significant effect on dissatisfaction and, therefore, did not upset otherwise stable deterrence relationships.

absolute and permanent adversary restraint in aberrant behavior; rather, the use of force is considered by Israel to be necessary occasionally for deterrence to succeed. Further, instead of deterrence by threats of high retribution, deterrence is achieved in a “golden range” of interactive behavior between two actors in a relationship of norms—norms are achieved by limited use of force, if needed, with low levels of retribution in play (Rid, 2012).²⁰⁴ The Israeli concept suggests “tacit bargaining” occurs in “violent dialogue” between two actors. This idea also reflects legal philosophy where violence cannot be removed from society, and instead is mitigated by law enforcement mechanisms in a risk-management strategy. The use of force creates and maintains rules, but disproportionate use of force is only for redefining or reestablishing the rules of the game that occasionally are breached by the adversary. The goal, therefore, given the realities of an ongoing deterrence relationship, is to deter through decisions and actions not too low to be weak, not too high to be provocative or escalatory, but through actions in the “golden range” of acceptable cooperative-conflictual interaction—doing just a little more when needed to encourage the adversary back down when he breaks the rules (Rid, 2012).²⁰⁵

The North Korean deterrence challenge for Japan is, therefore, somewhere between traditional general deterrence and immediate deterrence—a deterrence literature gap. Further, it is somewhere between traditional general deterrence and the behavioral “norms” ascribed by the Israelis in their “golden range” of violence that lies somewhere just short of immediate deterrence. North Korean behavior is neither completely status quo under peacetime general deterrence conditions, nor frequently or continually violent as violence is the accepted norm. North Korea, on the other hand, presents periodic

²⁰⁴ Page 129.

²⁰⁵ Pages 127-8 and 137-40.

provocations and aberrant behavior, including occasions of violence. In this case, Japan can use its BMD, and supplement its BMD as needed, to carefully manage North Korean behavior with the expectation that there will be episodes of cooperation short of permanent peace and competition short of armed conflict. For Japan, BMD is a staple of deterrence and through various BMD-related decisions and activities can “bargain” with North Korea in a “law enforcement” way to maintain North Korean norms of behavior. This type of approach is not addressed empirically in the deterrence literature.

“Tailoring” Deterrence.

In studying a case of deterrence, Raymond Aron (1969) broke it into five meaningful parts: (1) the actor doing the deterring; (2) the actor being deterred; (3) what that actor is being deterred from doing; (4) the circumstances that exist during the deterring; and, (5) the means being used to deter. This is an early suggestion that deterrence must be “tailored” in its approach in order to be effective (Dougherty & Pfaltzgraff, 2001).²⁰⁶ The early 1980s also saw a change in U.S. thinking about the nature of deterrence vis-à-vis the Soviet Union, including the ideas of tailoring deterrence to the adversary and continually adjusting that strategy. The idea of tailoring required taking into account, and then purposefully shaping, Soviet perspectives (Office of Technology Assessment, 1986).²⁰⁷ Ironically, the U.S. approach to deterring the Soviet seemed to capture third and fourth wave deterrence ideas at the end of the Cold War and not its beginning.

However, unlike the long period of Cold War superpower confrontation, recent years have been characterized by dynamic shifts in international politics, the centers and

²⁰⁶ Pages 371 and 385.

²⁰⁷ Page 77.

strengths of relative power, and sources and types of threats. A “one size fits all” deterrence approach under these circumstances seemed dubious if not perilous. M. Elaine Bunn suggested that deterrence “tailoring” could be done in three general ways: to specific actors and situations; by kinds of capabilities; and, communicating intentionally (Bunn, 2007).²⁰⁸ Michael Mazarr and James Goodby argue deterrence strategy should be approached by policymakers as a “highly contingent tool” requiring careful consideration of the context for which it is being called upon (Shultz, Drell, & Goodby, 2011).²⁰⁹ This approach is similar to the approach in the DO JOC and represents the relationship described between Japan and North Korea in the dissertation.

Adversary Understanding.

Regardless of whether one is deterring a formidable nuclear power, such as Russia or China, a regional actor, such as North Korea or Iran, or a non-state actor, emphasis is placed on the need for a deeper understanding of that adversary and its leadership. Not simply a review of its military capabilities, adversary understanding entails what they perceive in the environment, and how those perceptions interact with other perceptions of national identity and personal psychological factors. Adversary understanding, therefore, requires a broader case study including a biographical sketch of its leader making the decisions one seeks to deter. In this section, in addition to ideas on adversary decision-making modeling generally, another important feature has been consideration of the adversary’s decision calculus in deterrence strategy, particularly the psychological factors involved in adversary leader decisions and ideas for better

²⁰⁸ Page 1.

²⁰⁹ In Chapter 2 entitled, “Redefining the Role of Deterrence.” Pages 51-8.

understanding them.²¹⁰ Psychological analysis is no panacea. However, Jerrold Post, Stephen Walker, and David Winter suggest a leader's personality can matter a great deal under certain circumstances, including when the actor occupies a strategic location (Post J. M., 2003).²¹¹ This may apply to North Korean leaders given their position in Northeast Asia and its security affairs.

Walter Langer's report on Adolf Hitler was a pioneering biographical sketch and psychological analysis of an adversary leader conducted for the U.S. Office of Strategic Services (OSS) early in World War II (Langer, 1972).²¹² Langer organized his project around the person of Hitler and considered many of the types of topics still used by others today in adversary studies or biographical sketches including, among other areas, the social construct in which he led Germany and his emotive qualities (Langer, 1972).²¹³

²¹⁰ A significant amount of research and theorizing exists on this topic, some of it repetitive, some conflictual, others unique. Some of the details will be provided in the introduction to Chapter Five: Strategic Profile – Part I. Robert Joseph and John Reichart refer to this type study as a “strategic personality of the adversary” (Joseph & Reichart, 1999). See page 29. Robert Butterworth, given the dynamics of the 21st Century strategic environment, finds the notion of using deterrence as an organizing strategy troubling. Butterworth argues, “Deterrence, in sum, can be a desirable goal but an impossible guide. In pursuing it the country is seeking security through a concept that requires unavailable data about unknown processes, that is not empirically testable, and that cannot be shown to be working.” He does, however, acknowledge the DO JOC and its analytic approach in his footnote. The weaknesses and challenges notwithstanding, the dissertation will use the DO JOC, in part, to explore the influential effects of Japan's BMD upon North Korean leader perceptions, decisions, and behavior (Returning to Fundamentals: Deterrence and U.S. National Security in the 21st Century, 2011). See pages 4, 7.

²¹¹ Pages 1-2.

²¹² Pages 5, 11 and 25.

²¹³ Pages 153-233. Interestingly, Langer laid out eight possible future scenarios and addressed each with psychological factors developed after examining Hitler's patterns of behavior, concluding that if things turned against Germany, the most plausible outcome was Hitler committing suicide—the culmination of successive defeats and loss of self-confidence. See pages 237-41, 254. Dougherty and Pfaltzgraff warn, however, of the difficulty of drawing, for example, a definitive causal linkage between a distant past emotive event of a foreign leader and his present behavior. The dissertation uses a mixed methods approach in order to understand, where possible, correlations of North Korean behavior in relation to Japan's missile defense program activities. In doing so, the dissertation seeks insights into this relationship from study of variables and data on both sides while avoiding drawing overly confident causal linkages (Dougherty & Pfaltzgraff, 2001). Page 559.

One of the earliest authoritative reports on how various psychological factors correspond to nuclear conflict prevention, including deterrence, was published in 1964 by a group of psychiatrists formed in 1946. Psychological factors were placed among other factors in decision-making, including social, economic, and political factors (Committee on Social Issues, 1964).²¹⁴ These experts suggested that key psychological factors can be grouped in six categories: psychological defense mechanisms, such as denial and emotional isolation; the effects of fear or panic that can lead to impulsive behavior without regard to long-term consequences; dehumanization of man and society to depersonalize suffering consequent to conflict involving use of WMD; ethnocentric perceptual distortions or nationalism, creating stereotypical views of the opponent, ineffective communication, distrust, and misperceptions of what is reasonable behavior; mutual distrust fostering bad expectations leading to self-fulfilled bad behavior; and, the realities of the situation, combined with the psychological factors above, create internal conflict within political leaders seeking to maintain power and prestige domestically, on the one hand, while trying to deescalate tensions with the adversary in that situation (Committee on Social Issues, 1964).²¹⁵ These types of psychological factors may also be part of North Korean leadership decision-making and will be addressed where possible in the strategic profile chapters.

Process-wise, the perceptions of an adversary leader, including images, environmental stimuli and the behavior of other actors, are shaped through the leader's mental processes and form cognitive constructions of the circumstances and situation at hand. How such a leader perceives the situation will in turn shape his view of the possible

²¹⁴ Page 229.

²¹⁵ Page 312.

range of choices and any decisions that follow by that leader. Perceptions, therefore, are the essential ingredients of a decision. While conceptually this is a simple explanation of adversary decision-making, psychologists and theorists alike agree reality is complex, complicated further by a lack of in-depth empirical information from leaders in the process of perception formation and decision response (Dougherty & Pfaltzgraff, 2001).²¹⁶ Jervis's approach addresses "how decision-makers perceive others' behavior and form judgments about their intentions" using two parts or steps. The first is the actor's perceptions (images held and beliefs) as a cause of his behavior. The second step is comparison of the perception with previous information or perceptions (Jervis, *Perception and Misperception in International Politics*, 1976).²¹⁷ Cognition, then, generally deals with a decision-maker's "process" of information-handling—it is essentially a mental activity.

Cognition has certain elements and steps of order, including: input source (i.e., the environment); method of input reception (i.e., written communication; action); interpretation of the input; and, ascription of meaning to the decision-maker and decision calculus. Cognition merges objective or rational inputs with psychological factors throughout the cognitive process. For example: dissonance and heuristics may arise early in these steps; sentiments of national identification or other social factors may emerge in the middle; and, personal emotions of the leader may play a factor later in the process. Perceived consequences in a decision calculus, then, are cognitively constructed but

²¹⁶ Page 593.

²¹⁷ Pages 29-31. He cautioned, however, in placing too much emphasis or reliability on psychology in international relations and suggested five ways psychologists err: over-emphasis on emotional versus cognitive factors of misperception; laboratory experiments drive psychological theories, not the real world; policy biases exist in most analyses; "over-psychologizing" overlooks the existence of an international system and its components; and, they do not explain how people think since they are based in large measure on relatively small, unimportant beliefs. See pages 3-4, 8.

environmentally and socially informed. Further, calculus perceptions can be discounted, accentuated, dropped, or misinterpreted as psychological elements interact with more objective cost-benefit calculations. The mixed-method approach in the dissertation relies on tools like the strategic profile of North Korea, long-term data of broad external relations, and an analytic evaluative section to infer North Korean perceptions and their sources and how these may relate to Japan's missile defenses.

Psychological factors also emerge in adversary actions in deterrence relationships. Negotiations, for example, involve psychological aspects to be successful, including: avoidance of weakness; respect for the power position of the other; identification of shared values, principles, and goals; and appropriate use of candor or concealment of information (Committee on Social Issues, 1964).²¹⁸ Some adversary leaders also displace blame of domestic problems on external factors including historical animosities or interactions with others (Committee on Social Issues, 1964).²¹⁹ This type consideration appears to be another gap in the deterrence literature, particularly the Japan-North Korea case. This situation could be present in the North Korea-Japan relationship given their historical and conflictual past.

Other psychological factors involved in deterrence relationships could include: unmotivated biases—results of inherent cognitive limitations and the need to avoid being overwhelmed by environmental complexity and ambiguity—which lead to misperceptions of reality (Jervis, Lebow, & Stein, *Psychology and Deterrence*, 1989);²²⁰ problems associated with a leader's health, including masking illness by a leader's inner

²¹⁸ Pages 299-304.

²¹⁹ Pages 285-6.

²²⁰ Taken from chapter one, "Introduction: Approach and Assumptions." Pages 4-5.

circle, drug and alcohol abuse, and, aging and personality (Post & Robins, 1993);²²¹ pride as a motivation for accepting higher risks in crisis and conflict (Payne K. B., *Missile Defense in the 21st Century: Protection against Limited Threats*, 1991);²²² cognitive dissonance, where too much information or stimuli can simply overload a leader and, to cope, he might distort the information to match his core beliefs to simplify decision-making (Smith, 2006);²²³ uncertainty generally, explains why adversary decision-making requires calculating (Dougherty & Pfaltzgraff, 2001);²²⁴ interpretation of environmental factors or the filtering of information through the leader's inner decision support group (Raser, 1969);²²⁵ one's willingness to suffer pain, perhaps enduring pain over time (Lebow, 1996);²²⁶ overconfidence in one's abilities (Jervis, *Deterrence and Perception*, 1982-1983);²²⁷ failing to recognize the value of other policy alternatives (Jervis, *Deterrence and Perception*, 1982-1983);²²⁸ the tendency to assimilate new information to fit one's preexisting beliefs (Jervis, *Deterrence and Perception*, 1982-1983);²²⁹ or, the notion of "learning" through interactions (Bennett & Bueno de Mescquita, 2003).²³⁰

While there are too many factors to explore in the scope of the dissertation, some of these psychological factors, such as pride or the limiting role of a leader's inner circle, will be

²²¹ Pages xiii-xv. One case explored was the health of U.S. President Franklin Roosevelt late in his presidency, and his decision-making and behavior representing the U.S. in negotiations with foreign leaders at the 1945 Yalta Conference. In this case, Roosevelt's decision-making was clearly impaired by various illnesses. The consequences included: very little intervention in discussions; lack of mental vigor; difficulty formulating and expressing his thoughts; drifting from consciousness; and, diminished reasoning. See pages 25-30. Illness may have been a factor both in the lives of Kim Il-Sung and his son, Kim Jong-Il, the two North Korean leaders reigning during the period considered in the dissertation.

²²² Pages 118-20.

²²³ Page 33.

²²⁴ Pages 553-5.

²²⁵ Pages 51-2.

²²⁶ Pages 555-8 and 561.

²²⁷ Pages 20-4.

²²⁸ Pages 20-4.

²²⁹ Pages 20-4.

²³⁰ Pages 80-2.

considered in the strategic profile. Doing so may offer insights into the North Korean calculus and how Japan's BMD may influence it.

Ways and Means of Deterrence.

The ways and means of deterrence can best be understood as approaches to influencing the adversary's decision calculus. "Ways" include, for example, imposing costs or denying benefits. "Means" refers to military and non-military instruments of power that can be applied against the different "ways" with a view toward influencing adversary decisions and behavior.

Snyder includes at least three parts of a deterrence decision calculus described later by the DO JOC, including benefits of restraint, costs of action imposed if he acts, and benefits of action denied if she acts. Snyder characterizes benefit-denial as influencing the probabilities of an adversary achieving his objectives by, for example, holding one's territory, and by limiting damage to one's forces and nation (Snyder G. H., 1961).²³¹

Cost of restraint as a deterrence concept was described by Kenneth Watman and Dean Wilkening in their explanation of prospect theory and deterrence. Prospect theory, stemming from psychology, economics, and political science together, suggests the "prospect" of losses can influence leader decision-making in ways contrary to predictions of expected utility (Watman & Wilkening, 1995).²³² This description closely resembles

²³¹ Pages 4, 9-11, and 14-5.

²³² Pages 22-3. In one way, they will take more risk to avoid a loss than obtain a gain—losses simply weigh more than gains. In a second way, higher losses are risked with acting to avoid smaller, but sure, losses of not acting. According to the authors, this is referred to as "the strategic costs of inaction," where such costs of restraint are simply unacceptable and push the decision-maker to action. In this case, "leaders facing losses can be expected to choose a course of action that runs the risk of greater losses so long as this choice contains the possibility of averting the loss." Probabilities of the risks are important and play upon the decision. The original article on prospect theory by Daniel Kahneman and Amos Tversky was described as an alternative risk-based model to expected utility. A key feature was the replacement of

the “costs of restraint” described in the DO JOC, though the DO JOC concept tends to be risk-neutral; should an adversary be deemed risk-acceptant, then prospect theory would suggest the costs of restraint may weigh more than other factors in his decision-making. These ideas are also expressed in the exceptional 1962 book on U.S. and Japanese decision-making in and around the attack on Pearl Harbor by Roberta Wohlstetter (Wohlstetter, 1962).²³³

According to the 2006 Deterrence Operations Joint Operating Concept (DO JOC), the DoD’s most extensive and recent concept document on deterrence, “Deterrence operations convince adversaries not to take actions that threaten US vital interests by means of decisive influence over their decision-making. Decisive influence is achieved by credibly threatening to deny benefits and/or impose costs while encouraging restraint by convincing the actor that restraint will result in an acceptable outcome” (U.S. Department of Defense, 2006).²³⁴ The idea of influence over adversary decision-making is central to the dissertation.

The DO JOC also described several assumptions for deterrence strategy. First, adversary “decisions to act are based on actors’ calculations regarding alternative courses of action and actors’ perceptions of the values and probabilities of alternative outcomes associated with those courses of action.” According to the DO JOC, the adversary leader is informed in his decision calculus from various sources, including: “historical, cultural,

one’s expected utility of final assets with “values” of relative gain or loss (Kahneman & Tversky, 1979). See page 263.

²³³ Pages 354 and 356-7. She argued Japan was faced with a decision of going to war with U.S. or face national collapse and dishonor. The difference, in the Japanese calculation, was that at least in the war option the Japanese “wishfully” calculated the probability of U.S. acquiescence. The risks of not attacking were so overpowering, “the Japanese never seriously considered restraint.” The U.S. simply did not think Japan willing to accept such risks.

²³⁴ Page 8.

religious, ideological, political, military, informational, organizational, bureaucratic, personal, and other factors” (U.S. Department of Defense, 2006).²³⁵ Alternative “courses of action” appear to be either choosing to act or choosing to refrain from taking action. Alternative “outcomes” are described in terms of various perceived “consequences” of acting (benefits or costs) or restraining (again, benefits or costs). Perception “values” suggest a hierarchy of perceived consequences (i.e., some perceived consequences will matter more than others). Perception “probabilities” suggest the adversary judges some consequences to be more likely than others. His decision to act or restrain will, therefore, be based upon some internal calculations that consider more important factors and their likelihoods. Second, acknowledging the lack of ideal information about adversary leadership and its decision-making, the DO JOC states the assumption that “some adversary values and perceptions relevant to their decision-making can be identified, assessed, and influenced” by others, particularly the deterrer (U.S. Department of Defense, 2006).²³⁶ The dissertation will be based upon partial information of North Korean leadership, and that in large part provided by outside sources including outside experts and analysts with modest or no firsthand experience or interaction with the North’s senior leaders. Third, the DO JOC assumes, at least for deterrence planning purposes, the adversary leader to be “rational,” meaning he calculates his decision based on perceived consequences of action and restraint. Irrational leaders, such as those who make decisions based upon random factors, are rare (U.S. Department of Defense,

²³⁵ Page 11, including footnote 6.

²³⁶ Page 11.

2006).²³⁷ This closely compares with the description of rationality provided by Keith Payne and others and is applied in the dissertation.

Further, the DO JOC describes an ends-ways-means approach to deterrence operations. The “end” is decisive influence over the adversary’s decision such that he chooses to restrain from egregious action. The “ways” speak to altering each of the four broad perceptual components of his calculus (costs and benefits of action; costs and benefits of restraint). Lastly, the “means” speak to various instruments of national power that can affect influence over the adversary’s perceptions in some way, including a wide variety of military and non-military kinetic and non-kinetic capabilities (U.S. Department of Defense, 2006).²³⁸

Deterrence in theory and practice is about decision calculations and influencing the calculations of your opponent. Such calculations can either be material or psychological. Forms of influence might broadly include diplomatic, economic, and military means employed in many types of activities. Military means can include nuclear and non-nuclear strike forces; conventional combat power; defenses including BMD; intelligence, surveillance, and reconnaissance (ISR) assets; cyber warfare capabilities; and space-related capabilities. Non-military instruments of power can include diplomacy; economic and financial sanctioning capacity; and, law enforcement means. A deterrent

²³⁷ Pages 11, 25 and 39.

²³⁸ Pages 19-20. The author, in his 2009 NATO article, expands upon the calculus components by suggesting, from the adversary’s perspective, perceived benefits of action and costs of restraint “undermine” deterrence because they both work in favor toward an adversary choosing to act (deterrence failure). Benefits of action are attractive and “pull,” as it were, the adversary’s choice toward acting. Costs of restraint are painful motivators that “push” the adversary to acting. On the other hand, perceived costs of action and benefits of restraint “enhance” deterrence since they favor restraint. In a similar push/pull fashion, costs of action can be fearful inhibitors that “push” the adversary to restrain, while benefits of restraint, oftentimes dubbed “carrots” of deterrence, attract or “pull” the adversary’s choice toward restraint from action. The role of deterrence strategy is, therefore, to use available means to “moderate” those perceptions that incentivize him to act and “reinforce” those perceptions that incentivize him to refrain (Kamp & Yost, 2009). See page 204-5.

activity can include, for example, the movement and positioning of the defender's military forces (Huth P. K., 1988).²³⁹ This type of behavioral feature compares to Japan's activities with its BMD development and deployment over time. Another activity can be the use of targeted financial sanctions to deter, as was done on North Korea in 2005 in response to weapons sales, counterfeiting activities, and general concerns over North Korean nuclear proliferation (Shultz, Drell, & Goodby, 2011).²⁴⁰

As described earlier, nuclear weapons have played an essential role in 20th Century deterrence, though that role has changed with the end of the Cold War and emergence of regional threats. Acknowledging the post-Cold War security environment, Lawrence Kaplan argued "...when the point is to deter a group of states that, between them, possess fewer than two dozen ICBMs, enshrining defenselessness in official policy makes no sense" (Dudley, 2003).²⁴¹ BMD, therefore, makes much more sense in defense and deterrence, particularly in Japan's case.

²³⁹ Page 34.

²⁴⁰ In Chapter 2 entitled, "Redefining the Role of Deterrence." Pages 60-5. The U.S. Treasury Department undertook sanctioning charges against Banco Delta Asia (BDA), a financial institution in Macau handling funds for illicit North Korean activities. The immediate effect was the freezing of \$25 million in assets belonging to the North Korean regime. That same month the U.S. offered a nonaggression pledge as a step toward normalization of relations. The financial sanctions could have proven an effective deterrent tool but in the end had the opposite effect: the North Koreans abandoned the Six Part Talks; they conducted missile tests; and, they tested a nuclear device. The authors argue a key problem was managing deterrence expectations. Deterrence in the modern era, with challenges such as North Korea, requires nuanced approaches to influencing "discontinuity" from the status quo. Failure in this case led to U.S. self-restraint and North Korea meeting its objectives of regime survival, unambiguous movement to being a nuclear power, and continuation of illicit behavior. It was as if the U.S. understood the demands of peacetime, general deterrence, with little engagement and emphasis upon static capabilities, and that of immediate deterrence, with crisis action and overt saber-rattling. It did not, however, know how to navigate between the two with a state like North Korea. This is precisely where Japan finds itself today.

²⁴¹ Pages 70-3. In the case of chemical and biological weapons atop ballistic missiles, as in the threat facing Japan, Jon Day concluded deterrence and missile defenses to be the critical elements for addressing those threats (Ranger, 1998). See pages 22-8. Missile defenses are also an instrumental component of policy and a technological response to specific types of threats, an idea dating back to Sun Tzu and Clausewitz (Peoples, 2010). Pages 1 and 11-6.

Anne Sartori argues that deterrence is a form of communication or a “form of talk.” Deterrence is, therefore, essentially interstate communication and diplomacy the public face of deterrence. For example, the well-known “diplomatic protest” is both a verbal or written statement of unhappiness toward another country, but it carries an intrinsic message of sanction behind it. As such, it is a form of deterrence (Sartori, 2005).²⁴² There are many examples of diplomatic activities, even protests over ballistic missiles, from Japan toward North Korea that can be categorized, therefore, as deterrence activities. Related to diplomatic activities are “signaling” and strengthening one’s reputation in the mind of the adversary.

Signaling, according to Richard Ned Lebow, can communicate one’s limited objectives to an adversary in crisis or conflict to avoid wider violence, though signaling has a mixed record in deterrence (Jervis, Lebow, & Stein, *Psychology and Deterrence*, 1989).²⁴³ Schelling also emphasized the need for signaling (Lebow, 1996).²⁴⁴ Signaling, either through communication or physical action, can also be a means of escalation management to set a norm or to establish one’s reputation (Morgan, Mueller, Medeiros, Pollpeter, & Cliff, 2008).²⁴⁵ These are important considerations to Japan in its signaling with BMD to North Korea. However, as Lebow points out, the adversary may not ascribe

²⁴² Pages 124-5.

²⁴³ Taken from chapter 9, “Conclusions.” Pages 204-6. Lebow provides examples of how psychological factors can interrupt deterrence strategies, including “signaling” activities to the opponent. Two common mistakes occur by otherwise well-intentioned states seeking to signal effectively. First, they assume their adversary shares common symbols in communication, even though they may speak different languages or have different cultures. Subtle signals, therefore, have a poor track record of success. Unfortunately, even “calibrated signals” usually fail for this reason. Complexity in signaling and signaling during high drama make reception and understanding of the signal challenging for the receiver. Second, they fail to understand the context of the signal and how that context can ascribe certain meanings to the signal, including unintended inferences. For example, a signal must depart in some way from the “norm” of activity such that it draws attention by the adversary.

²⁴⁴ Pages 564-5.

²⁴⁵ Pages 30-3.

meaning, or salience, of the signal sent in the same way as the sender (Lebow, 1996).²⁴⁶

This suggests that North Korean reactions to Japan's BMD activities may not follow as Japan intended or as some missile defense-deterrence arguments suggest.

Deterrence assessment, in the end, is an exceedingly difficult challenge given the literature review provided above. Then-Secretary of Defense Caspar Weinberger acknowledged the difficulty in knowing whether deterrence strategies are working, in contrast to earlier thinking which measured differences in forces. He argued deterrence success was an intangible, stating, "We can never really measure how much aggression we have deterred, or how much peace we have preserved (Office of Technology Assessment, 1986)."²⁴⁷ Snyder, likewise, did not provide any process for the deterrer in making effectiveness evaluations, since the calculus factors are "highly intangible, unpredictable, unmeasurable, and incommensurable except in an intuitive way" (Snyder G. H., 1961).²⁴⁸ Further, Handberg suggested that, because deterrence success is the appearance of nothing happening, it can be self-deceptive to rely on lack of activity as a measurement of success. He argues that, in reality, deterrence has only been measured in failures (Handberg, 2002).²⁴⁹ This notion is one of the greatest and most enduring deterrence theoretic and analytic gaps in the literature. While the mixed method approach to the dissertation is a new one in which analytical inferences may be available,

²⁴⁶ Pages 566-7. For example, while the U.S. saw crossing the Yalu River from North Korea to China akin to someone crossing over the Rio Grande into the U.S., the Chinese simply did not see the Yalu nor the restraint from crossing it the same way. The consequence was they did cross it, marking that incident as a "failure in strategic communication." Lebow suggests that different people and states have different organizing principles which lead to perceptions of environmental stimuli that can be not only different from the one deterring but can be unpredictable altogether. Modern social psychology, he argues, seeks to better understand the role of these organizing principles, or frames of reference, in forming, influencing, and changing perceptions.

²⁴⁷ Page 77.

²⁴⁸ Pages 14-6, including footnote 11.

²⁴⁹ Page 89.

inferences from the qualitative strategic profile and North Korean behavioral activity captured in the quantitative chapter suggest some assessment is possible. Even modest improvement in general deterrence assessment, however, would help address this considerable gap and generate new thinking on the “impossible.”

Missile Defenses

Historical Development

Technical development of missile defenses in the United States began near the close of World War II as the U.S. and allies sought solutions to new long-range rockets used by Nazi Germany, such as the V-2 rocket. The combined threat of long-range, soon to be intercontinental-range, ballistic missiles with nuclear and then thermonuclear weapons drove research of defenses capable of engaging nuclear-armed ballistic missiles. This research raised serious technical and feasibility questions and, as the notion of U.S. offensive and defensive capability mixes emerged in response to the threats posed by the Soviet Union and China so, too, did questions of how best to deter such threats (Adams, 1971).²⁵⁰

Key decision points for the United States in its missile defense program development can provide comparisons for Japan’s program development. For the U.S., four periods can be defined; these four periods also compare generally to the key decision points and periods of Japan’s missile defense program, making review of the U.S. case even more germane to this dissertation. The first period of consideration was approximately 1945-1955, and includes: the end of World War II; technical growth coming from the need to address the German air and rocket threat; the rise of Soviet and Chinese ballistic missile and nuclear threats; and exploration of some concepts for missile

²⁵⁰ Page 17.

defenses (Adams, 1971).²⁵¹ This period provided a baseline of U.S. thinking and activity prior to the later BMD development period. The second period in the U.S. ballistic missile system program development, 1955-1958, saw initial study; and, by later standards, small U.S. military efforts into missile defense feasibility. This activity drew on experience in air defense technical development in the post-war period and included research mostly for the U.S. Army, such as Project NIKE, Hercules, and ZEUS (Adams, 1971).²⁵² The third period, 1958-1967, marked a large resource commitment by the U.S. government for ballistic missile defense research, development, and testing (Adams, 1971).²⁵³ Given the resource commitment, technological growth was rapid, leaving ZEUS behind in favor of an improved NIKE-X, then SENTINEL (a dual-missile defense system), and eventually the SAFEGUARD system designed less for point defense of U.S. military bases and more for wide area coverage of U.S. population centers. The fourth period lasted from 1967-1976 and was a period of U.S. BMD deployment in the face of Soviet (especially the SS-9 ICBM) and Chinese ballistic missile and nuclear threats (Adams, 1971).²⁵⁴ The SAFEGUARD system was deactivated in 1976. In his policy review of the introduction of U.S. ballistic missile defenses, Benson D. Adams argues that the central decision upon which U.S. policymakers wrestled in the 1950s and 1960s

²⁵¹ Pages 17-20.

²⁵² Page 20.

²⁵³ Page 111. All U.S. BMD systems were to be armed with large nuclear weapons to destroy incoming adversary warheads.

²⁵⁴ Pages 177-249. The SAFEGUARD system was chosen, first to provide area coverage of U.S. cities against Chinese attack (the fledgling Chinese ballistic missile and nuclear threat was deemed defensible by U.S. BMD, but could also provide limited defense against various Soviet attack options). It could have as many as 12 different sites around the U.S. However, as U.S. domestic resistance grew to the prospects of nuclear-armed defensive missiles located in or near U.S. population centers (e.g., Seattle and Chicago), and as arms control discussions occurred with the Soviet Union (including controls on BMD) the U.S. chose to field SAFEGUARD around U.S. missile sites to protect them from Soviet ICBMs and in limited numbers as part of the arms control bargain.

was what kind and how much effect missile defenses would have on deterrence (Adams, 1971).²⁵⁵

A very significant shift in the debate about deterrence and defense occurred following President Reagan's Strategic Defense Initiative (SDI) in 1983. This shift fundamentally altered U.S. development of national security strategies and how BMD fit into those strategies. In particular, the U.S. weighed deterrence, war-fighting, and defensive focused strategies, recognizing overlap among them and ultimately preferring the latter as the central approach to national security. These debates shaped the thinking about missile defenses and deterrence for many years into the future. Deterrence-only strategies were those where the "sole objective of strategic nuclear forces is to deter" and deterrence operated through the threat of retaliation (Carter & Schwartz, 1984).²⁵⁶ War-fighting strategies assumed nuclear war could occur and would, therefore, demand extensive planning for using nuclear weapons, defenses, and terminating conflict with a favorable outcome (Carter & Schwartz, 1984).²⁵⁷ The defense-centric strategies were

²⁵⁵ Page 3.

²⁵⁶ Pages 37-40. Two primary deterrence strategies emerged, differing only in what was to be targeted, that helped frame the role and value of missile defenses. First, "minimum deterrence" described a way to deter by possessing nuclear capabilities that threaten targets most valued by the opponent including his cities or industrial centers. BMD was thought to be destabilizing in this strategy since it would only lead to a nuclear offensive arms race. Opposing this was the "countervailing strategy" which targeted adversary military forces and leadership. BMD had value in this strategy, since it could protect U.S. ICBMs and command and control nodes it necessary to survive Soviet counterstrike.

²⁵⁷ Pages 41-3. To be effective, these strategies required high technologies for employing nuclear weapons with minimal collateral damage and for defense of one's high value military and civil assets. The central deterrent feature in these strategies was benefit-denial—denying the adversary his desired political or military objectives. In the 1960s, war-fighting was abandoned as a plausible "damage limitation" strategy and the U.S. instead focused its war-fighting capabilities on offensive systems and "assured destruction," a form of minimum deterrence in that deterrence, in a formulaic way, was assessed to be operative if sufficient U.S. counterstrike forces were available to destroy 20-30% of Soviet population and 50-75% of its industrial capacity. After President Reagan unfolded the SDI quest for the feasibility of a comprehensive defensive shield over the U.S., thinking on war-fighting strategies changed in that they provided confidence in defense of the nation and, in doing so, enhanced deterrence of adversaries and assured allies as well. Not only did new war-fighting strategies require a high "damage expectancy" confidence level with offensive systems, but quality defenses could ensure the U.S. a favorable position

preferred by the Reagan administration, though were less well-defined. The objective was to render Cold War deterrence strategies and nuclear offensive forces “obsolete” through the development and deployment of an expansive and technically superior strategic defense system, including vast midcourse and boost-phase BMD capabilities, coupled with offensive force reductions (Carter & Schwartz, 1984).²⁵⁸

Technical Characteristics of Ballistic Missiles and Missile Defenses

Ballistic Missiles.

Offensive ballistic missiles have different properties associated with them throughout the duration of their flight. These “phases” of flight of the attacking missile have, therefore, been used to develop BMD capabilities, with some defending in one phase while others defend in other phases. Having multiple ballistic missile defense capabilities to defend in multiple phases of attacking missile flight is referred to as a “layered defense” system. These phases of offensive ballistic missile flight include: boost phase (from initial launch through layers of atmosphere, lasting 3-5 minutes); post-boost phase (when the warhead, decoys, and other penetration aids separate from the “bus” carrying them and fly into the exoatmosphere, lasting up to 6 minutes); midcourse phase (flight of warheads and other objects through exoatmospheric to high endoatmospheric altitudes, lasting as long as 20 minutes); and, the terminal phase (the reentry period when decoys and penetration aids fall behind and the warhead passes through lower altitudes to

after nuclear conflict ended. To do so, strategic defenses needed to protect five categories of priority assets in the U.S.: offensive forces; command, control, communications, and intelligence (C3I) facilities; population centers; industry; and, other critical resources of the nation. BMD, along with other components of defense, would need to expand greatly in this strategy.

²⁵⁸ Pages 43-6. This strategy, too, featured a benefit-denial concept that would deter by making the prospects of attack uncertain. Proponents of this strategy argued that pressures within the U.S. and Soviet Union would push the two sides toward a defensive strategy, given moral and political arguments and technological improvements. They further argued imperfect defense would still be sufficient to deter. Opponents argued that it could still be interpreted as a war-fighting strategy and would, therefore, make the U.S. more willing to wage war since we could act with relative impunity.

its target, lasting several seconds perhaps as long as one minute) (Office of Technology Assessment, 1986).²⁵⁹ Offensive ballistic missile range is affected by the missile's booster power, makeup of the missile, its shooting angle or trajectory, the target it is aiming at, and climate conditions (Abmann, 2007).²⁶⁰

Opponents can employ various countermeasures to defeat or disrupt specific BMD components. These can be categorized as follows: blinding; spoofing and hiding; hardening; and, evading and fast-burn techniques. Further, an opponent could use a systems-wide approach to BMD countermeasures, including: saturation with a larger number of attacking warheads (thought to be far cheaper than the defenses needed to protect against such saturation); circumvention of part of the BMD system by evading its area of coverage (e.g., use of depressed-trajectory missile flight profiles); and, suppression, or directly attacking defensive components (Office of Technology Assessment, 1986).²⁶¹ Of the various tactics available to offensive capabilities, penetration aids carried on ballistic missiles offer the attacker ways to stress missile defenses and improve the chances of successful attack (Carter & Schwartz, 1984).²⁶²

Missile Defenses.

²⁵⁹ Pages 139-44.

²⁶⁰ Page 141, footnote 256.

²⁶¹ Pages 170-77.

²⁶² Penetration aids can include: decoy warheads; chaff; aerosols; maneuvering reentry vehicles (MaRVs); jammers; and, antiradiation homing vehicles. Decoys are intended to fool missile defenses into attacking harmless objects causing the actual warhead to get through. Decoys are more effective in space (exoatmospheric altitude) since there is no drag in weightless conditions of space and decoys fly like actual warheads. Designing a decoy to fly and look like an actual reentry vehicle at lower altitudes of approach (endoatmospheric) is very difficult. Chaff (fine metallic wires that reflect radar signals) and aerosols (small beads that reflect light) can be employed at exoatmospheric altitudes to confuse defending radars and optical sensors, respectively. Chaff and aerosols are not effective in the atmosphere since they are slowed behind attacking warheads due to the effects of atmospheric drag. Pages 107-8, including footnote 8. Other approaches to offense cited by Carter & Schwartz include: more ICBMs and RVs; other weapons such as cruise missiles; attacking defenses; attacking C3 of the defenses; employment tactics such as lofted trajectories; manipulation of nuclear effects; and shoot-look-shoot strategies. See pp. 105-09.

Functionally, missile defenses have changed little from their early development in the post-war period. These generally include: acquisition and detection warhead or reentry vehicle (RV) part of the missile through active radar surveillance; tracking of the RV and, if possible, providing trajectory predictions; discrimination of the RV from other incoming parts such as the missile booster, dummy or decoy RVs, and radar signal saturating chaff; guidance and tracking of the defending interceptor missile to the incoming RV; and interception of the RV by the interceptor or effects of its detonation (Yanarella, *The Missile Defense Controversy: Strategy, Technology, and Politics, 1955-1972, 1977*).²⁶³ Likewise, the components of a BMD system have remained essentially the same since the post-war period. These include: the radar for surveillance of enemy missiles and RVs; computers for processing the vast amounts of data needed to effectively engage defending against attacking missiles; the interceptor missiles (early U.S. BMD systems were nuclear-tipped); and command, control, and communications networks to knit all components together for display, decision-making, and engagement (Yanarella, *The Missile Defense Controversy: Strategy, Technology, and Politics, 1955-1972, 1977*).²⁶⁴

As missile defenses proved their value during the Gulf War the prospects for missile defense proliferation increased along with ideas for their role and deployment patterns. One study conducted by analysts at RAND used a quantitative model of cost-effective allocation. This study, which focused on conventional theater ballistic missile threats, such as that posed by North Korea, stated regional ballistic missile threats, coupled with WMD, could deter U.S. action or constrain it from achieving desired

²⁶³ Pages 6-7.

²⁶⁴ Page 7.

objectives in regional conflict. The Gulf War caused a shift in U.S. focus on missile defenses, away from a comprehensive national system associated with the goals of SDI and toward theater systems to defend against regional threats with limited offensive missile forces (Larson & Kent, 1994).²⁶⁵ Modeling the outcomes of missile defense engagements with one, two, and then three layers of defenses, demonstrated the more one layers defenses to engage attacking missiles passing through each “phase” of flight, the fewer total interceptors one needs to shoot to achieve a reasonably high probability of kill. The study suggested optimum defense requires a layered approach utilizing a 4:1 ratio of defending missiles to attacking warheads. It further argued early engagement of attacking missiles provided the highest payoff in missile defense efficiency (Larson & Kent, 1994).²⁶⁶

Ballistic missiles can be defended with two types of “kill mechanisms:” kinetic kill and directed-energy kill. Directed-energy systems (lasers and particle beams) use three primary means to destroy or disrupt an attacking missile: functional kill (prevents electronic components of the offensive weapon from performing properly); thermal kill (heating attacking boosters to the point they weaken, deform, or melt); and, impulse kill (shock waves collapse the target). Kinetic systems are designed to “hit” the attacking missile or component and disrupt or destroy it through kinetic energy. Kinetic systems use two primary means: nonnuclear kill (attacking missile is destroyed by collision); and,

²⁶⁵ Page xi.

²⁶⁶ Pages xii-xiii. By allocating interceptors among layers, the study’s authors argue a theater BMD system defending with 90% effectiveness against a regional adversary with over 500 potential attacking warheads would cost about \$15 billion, but about \$10 billion less than a single-layer system built to defend the same threat. Pages 56-8.

nuclear kill (missile is disrupted or destroyed by impact or effects of the defending missile's nuclear blast) (Office of Technology Assessment, 1986).²⁶⁷

Reliability of BMD has plagued its development and political support, possibly raising doubts in adversary minds about its effects in crisis or conflict. Some of these questions have been addressed with testing over time as well as operational experiences in conflict (Burns, 2010).²⁶⁸ More recently, the PAC-3 missile was reportedly "100% effective in Operation Iraqi Freedom," a claim provided by the missile's producer (Lockheed Martin Corporation, 2006).²⁶⁹ Performance of other, newer BMD systems is vastly improved. For example, from 2002-2008 Aegis-based SM-2 and SM-3 systems were successful in 18 of 22 tests while THAAD, from 2005-2009, was successful in 6 of 6 tests (Burns, 2010).²⁷⁰

Arguments For/Against Deterrence

Summary.

The Japan-North Korea deterrence problem set is not simply to deter war, or even armed attack with ballistic missiles. As the various missile defense-deterrence arguments portray, BMD can influence an adversary's behavior by playing upon many perceptual nuances or consequences of his decision under consideration. Adversary choices, especially in the North Korean case, can involve behavior in many ways other than

²⁶⁷ Pages 155-8. The U.S. no longer retains a nuclear-armed kill mechanism (the Safeguard ABM system used this type of kill mechanism), but Russia maintains an ABM system using nuclear-armed defensive missiles.

²⁶⁸ Pages 74-5. For example, Philip E. Coyle, III, head of DoD's weapons testing programs from 1994-2001, believed Patriot PAC-3 batteries in the upcoming 2003 invasion of Iraq would suffer from unreliability and be able to successfully engage less than 50% of Iraqi Scud missiles. After the invasion, the success rate was estimated much higher, including the U.S. Army reporting 9 of 9 were shot down. This, however, marks a significant improvement over PAC-2 performance in the Gulf War. According to a Government Accounting Office (GAO) report, only four possible hits occurred out of 158 Patriot missiles launched at 47 Scuds. See page 110.

²⁶⁹ See "Missile of Choice" section.

²⁷⁰ Pages 124 and 130-1.

simply choosing to fire, or not fire, ballistic missiles. The North Korean security posture and power-based approach to diplomatic and economic relations are all undergirded by its ballistic missiles. BMD, therefore, can influence North Korean choices across the board. This broad perspective is the approach taken in the dissertation. The question is, as Japan brought forth BMD to deter North Korean behavior, have any of the various perceptions or influences of BMD presented in the literature factored into North Korea's calculus and possibly affected its choices and behavior? The 50+ arguments presented in Table 1 below represent all of the pros and cons discovered in the dissertation's research, along with one other postulated by the author. For the sake of brevity, narrative descriptions have been omitted here. The points of view, describing both how BMD can enhance or help deterrence and how deterrence can be hurt or undermined by BMD, have been categorized into a handful of broad "domains" of activity (i.e., political) and into decision calculus categories perceived by the adversary (i.e., costs, benefits). The arguments are taken from a variety of sources; some originate from a single case, others from many cases. If the perspective has been repeated in several sources, multiple sources may be cited; the source citations are not intended to be exhaustive but merely to capture at least one source from which the idea originated. The author has, on occasion, broadened the view captured in literature sufficiently to apply to the Japan-North Korea case where, in the author's judgment, this is possible. Other views are so narrow, such as those dealing with implications for U.S.-USSR nuclear arms control, or those with consequences explicitly in wartime conditions, that they are identified as N/A—not applicable—to the focus of the dissertation and will not be addressed further.

It appears, then, there are four broad ways to approach deterrence effectiveness assessment or analytically to address whether an adversary's decision-making perceptions and behavior are changing. The first way is a lack of evidence of deterrence failure. In other words, if deterrence was failing, or had failed, one would expect to observe or hear certain types of statements or behavior or activities from the adversary. The second way is if the adversary changes behavior or course of action altogether, away from the thing being deterred. The third way one could assess deterrence may be working is in drawing inferences about the adversary's decision values and the effect of one's deterrence strategy upon those values as suggested above. Fourth, there may be relational change with the deterrer politically or with respect to national security. Looking at strategic profile and decision calculus types of qualitative information along with quantitative data may provide insights or inferences into whether or not Japan's BMD program has had any deterrence effects in any of the four areas above. This is a unique approach to addressing North Korean behavior and the effect of Japan's BMD in KJI's calculus.

Table 1: Arguments

MISSILE DEFENSE-DETERRENCE ARGUMENT	EFFECT	CALCULUS	DOMAIN	SOURCE	COMMENT
Protect or assure domestic population	Help	Deny Benefit	Political	(Crouch, Joseph, Payne, & Roehl, 2009) (Postol, 1991-1992) (Ballistic Missile Defense Review Report, 2010)	
Demonstrate stake/commitment to assure allies or coalition partners	Help	Deny Benefit	Political	(Bowen, 2001)	
Create visible signaling or communication channel	Help	Deny Benefit	Political	(Rubin, 2008)	
Communicate defensive posture	Help	Mitigate Cost of Restraint	Political	(Rood, 2008)	Reduces fears he must preempt
Help manage escalation or buy time for diplomacy	Help	Deny Benefit	Political	(Goure, Hyland, & Gray, 1979) (Payne K. B., Missile Defense in the 21st Century: Protection against Limited Threats, 1991) (Rood, 2008)	
Defender more willing to escalate, take risks, or intervene; causes regional actor to back down	Help	Impose Cost	Political	(Powell, 2003) (Yost, The US Nuclear Posture Review and the NATO Allies, 2004)	
Increase adversary uncertainties and complications to achieve military and political goals	Help	Deny Benefit	Political	(Kaneda, Tajima, Kobayashi, & Tosaki, 2007)	
Deploying BMD only in crisis is less provocative than deploying offenses	Help	Deny Benefit	Political	(Karp, 2004)	
Provide defensive hedge against unforeseen future threats	Help	Deny Benefit	Political	(Ballistic Missile Defense Review Report, 2010)	
Provide rational non-emotive option less likely to result in unintended escalation	Help	Deny Benefit	Political	(Kaneda, Tajima, Kobayashi, & Tosaki, 2007)	
Deny adversary domestic psychological gain through ballistic missile test	Help	Deny Benefit	Political	(Schnurr, 2010)	
Demonstrate credibility through successful intercept	Help	Deny Benefit	Military	(Deterrence Operations Joint Operating Concept, 2006)	
Protect against miscalculated, unauthorized, or accidental use/attack	Help	Deny Benefit	Military	(Adams, 1971) (Glaser & Fetter, National Missile Defense and the Future of U.S. Nuclear Weapons Policy, 2001)	I.e., cannot "pretend" missile launch was accident and reap benefits
Provide damage limitation to operationally deployed forces	Help	Deny Benefit	Military	(Deterrence Operations Joint Operating Concept, 2006)	
BMD deployment schema complicates adversary operational planning	Help	Impose Cost	Military	(Larson & Kent, 1994) (Lebovic, 2002)	
Deny or confound military or political benefits sought by adversary	Help	Deny Benefit	Political & Military	(Brodie, Strategy in the Missile Age, 1965)	
Decreases pressure upon defender to take preemptive action	Help	Deny Benefit	Political & Military	(Payne K. B., Missile Defense in the 21st Century: Protection against Limited Threats, 1991)	
Decreases adversary value of ballistic missiles; may build or deploy fewer	Help	Deny Benefit	Political & Military	(Payne K. B., Missile Defense in the 21st Century: Protection against Limited Threats, 1991)	
BMD cooperation creates a more formidable and resolute coalition	Help	Impose Cost	Political & Military	(Bowen, 2001)	
Strengthens arms control by hedging against adversary breakout or noncompliance	Help	Deny Benefit	Political & Military	(Carter & Schwartz, 1984)	
Provide a conventional deterrent that nuclear weapons or cost-imposition instruments cannot provide	Help	Deny Benefit	Political & Military	(Kaneda, Tajima, Kobayashi, & Tosaki, 2007)	
Strengthen nuclear nonproliferation by keeping Japan from pursuing nuclear weapons capability	Help	Provide Benefit of Restraint	Political & Military	(O'Donogue, 2000)	
Dissuade adversary ballistic missile proliferation; more costly	Help	Impose Cost	Political & Economic	(Simon, 2002)	
Protect defender's freedom of action	Help	Impose Cost	Political & Economic	(Crouch, Joseph, Payne, & Roehl, 2009)	
Reduce coercive power of adversary ballistic	Help	Deny Benefit	Military &	(Lebovic, 2002) (Ballistic	

missiles			Economic	Missile Defense Review Report, 2010)	
Raises cost to adversary by making him build many more ballistic missiles	Help	Impose Cost	Military & Economic	(Carter & Schwartz, 1984)	
Maintains technological edge useful in all missile-related capabilities	Help	Deny Benefit	Political, Military & Economic	(Yost, Adapting NATO's Deterrence Posture: The Alliance's New Strategic Concept and Implications for Nuclear Policy, Non-Proliferation, Arms Control, and Disarmament, 2011) (Carter & Schwartz, 1984)	
Unable to provide perfect defense	Hinder	Does Not Deny Benefit	Political	(Lebovic, 2002)	
Contribute to defender's credibility; increases probability ballistic missile attack will elicit desired political response	Hinder	Does Not Deny Benefit	Political	(Mendelsohn, 2003)	
Cause adversary to develop or use new countermeasures, complicating defenses	Hinder	Does Not Deny Benefit	Military	(Cimbala, Deterrence and Friction: Implications for Missile Defense, 2002) (Palmore & Melese, A Game Theory View of Preventive Defense against Ballistic Missile Attack, 2001)	
Push adversary to develop or use other or asymmetric means of coercion or attack	Hinder	Does Not Deny Benefit	Military	(Cimbala, Deterrence and Friction: Implications for Missile Defense, 2002) (Palmore & Melese, A Game Theory View of Preventive Defense against Ballistic Missile Attack, 2001)	
Limited deterrent effect against adversary missile tests used for political purposes	Hinder	Does Not Mitigate Costs of Restraint	Political & Military	(Schnurr, 2010)	Strong image domestically still enhanced, Resolute image externally still portrayed
Cause adversary ballistic missile proliferation	Hinder	Does Not Deny Benefit	Political & Economic	(Glaser, Do We Want the Missile Defenses We Can Build?, 1985) (Adams, 1971)	
Exacerbate tensions with other potential adversaries	Hinder	Does Not Deny Benefit	Political & Economic	(Quackenbush, National Missile Defense and Deterrence, 2006) (Palmore, US Ballistic Missile Defense and China, 2003)	
Provide a psychological counter to ballistic missile armed terrorist groups	Help	Deny Benefit	Political	(Postol, 1991-1992)	N/A - North Korea is a state actor
Deny state sponsors of terrorism capacity to retaliate against strikes against those states	Help	Deny Benefit	Political	(Dudley, 2003)	N/A - North Korea is not a state sponsor of terrorism
Adversary avoids WMD threshold; avoids risk of limited WMD assets being shot down	Help	Deny Benefit	Political	(Office of Technology Assessment, 1986)	N/A - applies to wartime
Save many lives	Help	Deny Benefit	Political	(Adams, 1971)	N/A - applies to wartime
Help achieve "balance" with Russia	Help	Deny Benefit	Political	(Adams, 1971)	N/A - applies to U.S.-Russia
Protect forces for options other than preemption	Help	Impose Cost	Military	(Glaser & Fetter, National Missile Defense and the Future of U.S. Nuclear Weapons Policy, 2001)	N/A - Japan has no offensive/retaliatory forces
Strengthen credibility by protecting second strike/retaliatory capability	Help	Impose Cost	Military	(Rubin, 2008)	N/A - Japan has no offensive/retaliatory forces
Increase credibility to defend against limited ballistic missile attack	Help	Deny Benefit	Military	(Glaser & Fetter, National Missile Defense and the Future of U.S. Nuclear Weapons Policy, 2001)	N/A - applies to wartime

Dissuades adversary pursuit of nuclear weapons	Help	Deny Benefit	Political & Military	(Simon, 2002)	N/A - North Korea already has nuclear weapons
BMD lowers the prospects of any type of attack	Help	Deny Benefit	Political & Military	(Karp, 2004)	N/A - applies to wartime
Drive offensive forces arms control reductions	Help	Deny Benefit	Political & Military	(Carter & Schwartz, 1984)	N/A - applies to U.S.-Russia
BMD contribute to warfighting and war-winning success	Help	Impose Cost	Political & Military	(Karp, 2004)	N/A - applies to wartime
Adversary attacks preemptively fearing BMD masks offensive intent	Hinder	Does Not Mitigate Cost of Restraint	Political	(Glaser, Do We Want the Missile Defenses We Can Build?, 1985)	N/A - applies to wartime; fears it must attack
Defender more willing to escalate or take risks; increases probability of attack by large nuclear state	Hinder	Does Not Mitigate Costs of Restraint	Political	(Powell, 2003) (Binnendijk, 1986)	N/A - applies to wartime; fears its forces will be lost
Lack of credibility to defend against large ballistic missile attacks	Hinder	Does Not Deny Benefit	Political	(Lebovic, 2002)	N/A - applies to wartime
Encourage massive ballistic missile attack to overcome defenses	Hinder	Does Not Deny Benefit	Political	(Brodie, Strategy in the Missile Age, 1965)	N/A - applies to wartime
Undermine extended deterrence risk-sharing; guarantor is risk-averse	Hinder	Does Not Deny Benefit	Political	(Glaser & Fetter, National Missile Defense and the Future of U.S. Nuclear Weapons Policy, 2001)	N/A - applies to U.S.
BMD-driven ballistic missile force reductions increases instability	Hinder	Does Not Deny Benefit	Political		N/A - applies to U.S.-Russia
Reduced prospects for nuclear weapons arms control due to worse relations with adversary on BMD	Hinder	Reduces Cost	Political	(Glaser, Do We Want the Missile Defenses We Can Build?, 1985)	N/A - applies to U.S.-Russia
Encourage adversary to use HEMP to counter BMD capabilities	Hinder	Does Not Deny Benefit	Military	(Deterrence Operations Joint Operating Concept, 2006)	N/A - applies to wartime

CHAPTER FOUR: RESEARCH DESIGN

Introduction²⁷¹

In the past 20 or more years, scholarly research has emphasized the utility of missile defenses in warfighting, such as the 1991 Gulf War, or how defenses protect the U.S. homeland against regional powers developing long-range missiles and nuclear weapons. Japan, however, chose to develop and deploy its own BMD system for deterrence of North Korean political coercion undergirded by ballistic missile threats under general deterrence conditions and to defend itself against possible North Korean raids with small numbers of non-nuclear ballistic missiles. Understanding whether and how Japan's BMD program contributed to, or undermined, deterrence of North Korean coercion was the main idea of the dissertation and was pursued using multiple research methods: (1) a review of historical interaction; (2) in-depth theoretic review of deterrence, missile defenses, and their relationship; (3) in-depth study of North Korea and its leadership; (4) research and development of a deterrence-oriented strategic profile; (5) statistical analysis of North Korean behavior and possible changes correlated to Japan's BMD and other variables; and, (6) integrated analysis pulling upon information from all the above. This basic framework is described below in greater detail. A discussion of the research design begins below with a brief review of the theoretic background of deterrence and missile defense.

²⁷¹ A note on nomenclature used in the dissertation: rather than using the formal title "Democratic People's Republic of Korea," or DPRK, the terms North Korea and North Korean were used for readability within the narrative; since the names of North Korea's leaders are used with various spellings by different authors and sources, one common style was adopted for use in the dissertation for all three of North Korea's leaders including Kim Il-Sung (founder and first leader, also abbreviated KIS), Kim Jong-Il (son of KIS, second leader, dominant object of research in the dissertation, also abbreviated KJI), and Kim Jong-Un (son of KJI, third and current leader, also abbreviated KJU); and, in Korean culture family surnames precede given names and this style is maintained in the dissertation.

The North Korean strategy with regional opponents has for years been one of political coercion undergirded by a strong ballistic missile force capable of reaching a wide variety of targets in the region, including targets in Japan. Though North Korean coercive behavior is not limited to threats with, or provocative tests of, ballistic missiles, the underlying threat against regional opponents is that of ballistic missiles—either with overflight of missiles being tested, or the threat of direct missile raid as punishment for noncompliance with the wishes of North Korean leaders. Further, the predominant North Korean ballistic missile threat is regional; that is, North Korea's missiles are not yet of the range required to strike the continental United States. Instead, the vast majority of their missiles is capable of, and likely intended to, reach targets within the Northeast Asia region, including Japan. North Korean coercion toward Japan is not conceived, however, as a binary behavioral decision of North Korea's leaders where they were either highly coercive toward Japan or highly cooperative. This would not be consistent with North Korean patterns of behavior. Rather, North Korean behavior was expected to reflect increases or decreases in cooperative and conflictual toward Japan in smaller gradients of behavioral intensity over time across a wider range of positive and negative behavior. This broad perspective is the approach taken in the dissertation.

For these reasons, ballistic missile defense (BMD) may play a special and significant role for regional actors like Japan seeking to deter North Korea coercion or attack with ballistic missiles. While BMD could certainly play a decisive role in conflict involving attack upon Japan with ballistic missiles, it is the counter-coercion, deterrence aspects of BMD of concern in the dissertation. Many theorize about the defensive value of missile defenses in conflict or how BMD can help deter war from happening in the

first place. But few discuss the possible deterrent effects of BMD in general deterrence situations like that between Japan and North Korea. Nuclear retaliation is not an option open to Japan, and while such a capability contributes to the prospect of escalation to conflict, nuclear threats would not likely be very credible in general deterrence conditions anyway. Japan finds itself needing its own, non-nuclear capabilities to deter North Korean coercion independent of U.S. capabilities. In this way, Japan's BMD would serve to moderate North Korea's behavior toward Japan and help establish norms of behavior less provocative than they would be otherwise.

Two recent events involving North Korea's Taepodong long-range offensive ballistic missile point to the relationship between North Korea and Japan and the potential role of missile defense to influence North Korean behavior. The first event was the launch of Taepodong-1 on August 31, 1998, which overflowed Japan. This event helped solidify Japan's pursuit of ballistic missile defenses, which were later accelerated after North Korea, in 2006, first tested a nuclear device. On April 5, 2009, a longer-range variant of Taepodong was launched, but the North Koreans opted to comply with a United Nations request for safety of flight and navigation pre-launch notifications. The behavior and statements of North Korea were clearly different from the 1998 event. But why did they modify their behavior? Did deployment of Japan's missile defenses influence North Korea's decision to test the missile in a less-threatening manner?

The advantages missile defenses provide the defender can, for example, influence the attacker's decision-making by denying the operational benefits sought—at least to the degree BMD is effective—and denying political benefits sought by the attacker with the use of his missiles whether or not BMD is highly effective. In this case, use of missile

defense decreases the adversary leader's perception of the probability the missile attack will successfully reap the benefits sought, and illustrates but one way missile defense can deter an aggressor from carrying out a missile attack in the first place. However, because ballistic missiles are such an integral part of North Korea's strategy toward Japan, the influence of Japan's missile defenses upon North Korean leadership will likely be reflected widely across North Korean behavior.

The central question was *not* simply whether Japan's BMD affected only North Korean ballistic missile-related activity—this was too narrow. Rather, the question was whether Japan's BMD affected North Korean behavior toward Japan generally and in areas not specific only to missile activity. This is because North Korean behavior, whether cooperative or conflictual, was carried out in the shadow of North Korea's ballistic missiles which undergirded its overall political coercion strategy. Overall North Korean behavior, therefore, was a gauge of the strength of the underlying missile-related strategy. The question, then, was *whether Japan's BMD strengthened or undermined deterrence of North Korea*. But other related questions were also informed by the research of the dissertation. Did North Korea show more restraint, especially in its relations with Japan, in the shadow of Japan's missile defense program? Did Japan's missile defenses have the opposite effect? Or, might Japan's BMD strengthen deterrence in some circumstances and undermine deterrence in others? In what other ways might Japan's BMD influence North Korean behavior? The missile defense-deterrence literature provides many arguments regarding BMD strengthening or undermining deterrence in various situations. However, there was not any in-depth research of BMD

over time in the Japan-North Korea case especially under general deterrence conditions. That was the subject of this dissertation.

Theoretic Background

Deterrence Theory

The general state of affairs between North Korea and Japan is often framed in international relations theory in terms of a deterrence relationship where Japan is seeking to deter North Korean coercion or even aggression. This is understandable given Japan's constitutional constraints since WWII, its lack of offensive military arms, and the danger posed by North Korea the past several decades with its ballistic missiles and threatening behavior. This creates a unique deterrence situation for Japan since their BMD capabilities are in a purely defensive posture. Theoretically, Cold War-era deterrence came to describe how one side's offensive arms influenced an opponent from taking a hostile action, particularly nuclear attack. The dissertation, however, explored how the use of defensive capabilities influenced adversary behavior along a wider spectrum of behavior under peacetime—but coercive—conditions between two actors with a conflictual history. Further, one could argue that the U.S. extended deterrence relationship with Japan is a powerful backdrop for Japan's position and that researching the Japan-North Korea case must acknowledge a dominant U.S. position both over Japan and in North Korea's behavior over Japan. But this would be valid only to the extent extended deterrence security was provided Japan by the U.S. to include North Korean behavior short of war—the focus of the dissertation. While extended deterrence clearly looks to a scenario of North Korean war against Japan, no evidence was discovered that extended deterrence by the U.S. included peacetime security guarantees regarding North

Korean coercive or provocative behavior. In fact, Sugio Takahashi, Deputy Director of Japan's Office of Strategic Planning in their Ministry of Defense, stated North Korea could conduct a "cheap-shot strike" against Japan using a limited number of ballistic missiles ("one or two") as blackmail or coercion without triggering U.S. military retaliation (conventional or nuclear) as part of U.S. extended deterrence security guarantees; a greater number of North Korean ballistic missiles attacking Japan (a number was not suggested) would be needed to cross a "threshold" for U.S. retaliation (Takahashi, *Ballistic Missile Defense in Japan: Deterrence and Military Transformation*, 2012).²⁷² There is room, therefore, to provide analytic separation between Japan and the U.S. to address the impact of Japan's BMD capabilities to influence North Korean behavior short of war.

Such a deterrence-oriented relationship between Japan and North Korea continues today. More specifically, relations between the two states during this period existed across a spectrum ranging from general deterrence, at the one end, and an escalated situation of acute crisis or immediate deterrence at the other end (Huth & Russett, *General Deterrence between Enduring Rivals: Testing Three Competing Models*, 1993).²⁷³ Theoretically, this helped frame deterrence by Japan, in context of Japan-North Korean relations, as an activity upon North Korea's behavior, not simply deterrence of a North Korean decision to wage war. But the potential range of cooperative and conflictual interaction between two actors in general deterrence conditions is undefined in the literature with any precision. As a result, general deterrence in the dissertation is conceived to include a relatively wide range of Japan-North Korea cooperative and

²⁷² Page 23.

²⁷³ Huth and Russett provide a very good description of general and immediate deterrence concepts. Pages 61-73.

conflictual interaction, just as North Korean coercive behavior (mentioned above) can include a wide range of interaction short of crisis or war. While the dissertation was grounded in deterrence theory, of necessity it was tailored to the influencing role of missile defenses.

The Japan-North Korea deterrence problem set is not simply to deter war, or even armed attack with ballistic missiles. As the various missile defense-deterrence arguments portray, BMD can influence an adversary's behavior by playing upon perceptual nuances or consequences of his decision under consideration. North Korean choices can involve behavior in many ways other than simply choosing to fire, or not fire, ballistic missiles. The North Korean security posture and power-based approach to diplomatic and economic relations are all undergirded by its ballistic missiles. BMD, therefore, can influence North Korean choices in many ways and, in general deterrence conditions short of war or even short of war-related crisis.

From the theoretic literature review, 54 arguments regarding how BMD may strengthen or undermine deterrence were identified, many with small differences of nuance. Over half of these were identified by the author as having some possible application to the Japan-North Korea case. Most of the 54 arguments were optimistic, suggesting BMD strengthened deterrence and did so usually by denying the adversary some sort of benefit he perceived if he were to use his ballistic missiles in any way, whether actually shooting them or coercing others with them. A considerable number of these arguments reflected benefits perceived in the political and/or military domains. See Table 2 for a summary of the various missile defense-deterrence arguments taken from Chapter Three: Literature Review. This table helps understand the broad areas where

BMD may have been a factor in Japan's efforts to deter North Korean coercion in general deterrence or provocative—but sub-conflict—conditions.

Table 2: Summary of Missile Defense-Deterrence Arguments

	Possible Application to Japan-North Korea Case	NOT Applicable to Japan-North Korea Case	Total
Number	34	20	54
Strengthens Deterrence	27	12	39
Undermines Deterrence	7	8	15
Does/Not Deny Benefit	19/6	9/5	27/11
Does/Not Impose Cost	6/0	3/1	9/1
Does/Not Mitigate Cost of Restraint	1/1	0/2	1/3
Does/Not Provide Benefit of Restraint	1/0	0/0	1/0
Political Domain	26	16	42
Military Domain	17	8	25
Economic Domain	7	0	7

Literature Gaps

One of the benefits stemming from the dissertation research design is helping to address gaps in the literature. First, there is very little quantitative academic literature on North Korean behavior, especially in its foreign policy over an extended period, and none solely on the Japan-North Korea relationship over time. Neither is there any long-term quantitative international relations (IR) literature on the impact of Japan's missile defense program upon North Korea's behavior. Further, there is little IR literature on missile defenses generally (e.g., in Table 1, there were only 10 academic sources in the past 10 years), and there appears to be a specific need for improving deterrence literature regarding the effects of modern non-nuclear capabilities, including missile defenses, upon

potential adversary behavior over an extended period of time under general deterrence conditions. The rigidity of general deterrence theory also seems inadequate for addressing modern IR security challenges such as dealing with coercive strategies like that of North Korea. Additionally, there does not appear to be examination of the various arguments of missile defenses to support or undermine deterrence in a single long-term, time-series case study, especially one employing a mixed-method approach.

Most deterrence-related literature dealt with traditional military issues of Cold War Era nuclear warfare and strategic forces, international relations issues such as arms control, and cases of U.S. strategies historically as part of the North Atlantic Treaty Organization (NATO). Very little deterrence literature involved Asia and most missile defense-deterrence literature addressed U.S. national missile defense issues and most of those relative to deterring nuclear war. Of the 35 books and numerous articles of academic literature reviewed on missile defense-deterrence, none were on the deterrence effect of Japan's missile defenses toward North Korea over time.²⁷⁴ The closest discussion was Lars Abmann's volume (Abmann, 2007), which looked at all regional BMD efforts, including Japan's, but predominantly through the lens of Chinese security interests. Another source was Michael D. Swaine, et al (Swaine, Swanger, & Kawakami, 2001), which discussed the early period of Japanese contemplation of BMD following the 1998 surprise TD-1 launch over Japan. Both of these volumes, however, were very dated. Further, of the 54 specific arguments identified on whether missile defenses enhance or

²⁷⁴ A small sample: Michael W. Simon, "Rogue State Response to BMD: The Regional Context" (Simon, 2002); Palmore, Julian, and Francoise Melese, "A Game Theory View of Preventive Defense Against Ballistic Missile Attack," *Defense & Security Analysis* 17, no. 2 (Palmore & Melese, A Game Theory View of Preventive Defense against Ballistic Missile Attack, 2001); Theodore A. Postol, "Lessons of the Gulf War Experience with Patriot" (Postol, 1991-1992).

undermine deterrence, none of the arguments were based upon exclusive research of the Japan-North Korea case.

In recent years, deterrence literature began moving beyond basic questions of Cold War nuclear deterrence to provide additional insight into: the basis for understanding the deterrent functions upon adversary behavior short of war (general versus immediate deterrence);²⁷⁵ expansion of deterrence concepts beyond merely fear of cost-imposition (now more emphasis on benefit-denial and consequences of restraint);²⁷⁶ and increasing recognition of the positive and negative deterrent implications of missile defenses. The emphasis in the literature, however, was upon U.S. BMD in defending the U.S. homeland or U.S. use of BMD in conventional conflict in the Middle East over the past 20 years. However, all three of the areas in deterrence literature above have failed to address the role of missile defenses upon adversary *behavior* generally, or the Japan-North Korea case in-depth over time.

In the early period of the Cold War, the crux of the debate was the meaning of U.S. anti-ballistic missile (ABM) systems not only to defend the nation but the specifically offensive nuclear forces. However, the Japanese BMD case was essentially free of the constraints of this argument since Japan had no meaningful offensive capabilities capable of attacking or retaliating against North Korea in response to an attack. The advancement, however incremental, in deterrence concepts and theory failed to explore the case of Japan's BMD with analytic rigor, though it offered an opportunity to further theoretical development.

²⁷⁵ For general and immediate deterrence concepts, see Huth and Russett (1993); pp. 61-73.

²⁷⁶ See, for example, the *Deterrence Operations Joint Operating Concept* (U.S. Department of Defense, 2006).

Huth and Russett articulate the great uncertainties present in deterrence generally, and regarding measuring outcomes specifically (Huth & Russett, *Testing Deterrence Theory: Rigor Makes a Difference*, 1990).²⁷⁷ In the statistical analyses in the dissertation the *direction* of North Korean behavior was utilized as a measure, though it was understood such analyses are statistical correlations only. Adding additional analysis from qualitative research aided in clarifying or strengthening analyses. Generally, however, uncertainty in deterrence analysis is unavoidable apart from undisputed declaration of intent and thought from the adversary leader deliberating decision-making perceptions and ultimately making the choices.

One key limitation in Huth and Russett's early approach to deterrence assessment was theorizing about deterrence only at the level of conflict or armed attack (Huth & Russett, *Testing Deterrence Theory: Rigor Makes a Difference*, 1990).²⁷⁸ The approach of the dissertation was within general deterrence conditions, a theoretical category largely ignored in their early analysis. Later, when Huth and Russett sought to address the topic of testing general deterrence, they chose data that involved crises that lead to full-scale war (Huth & Russett, *General Deterrence between Enduring Rivals: Testing Three Competing Models*, 1993).²⁷⁹ But this approach was too limiting in that general deterrence was assessed successful if armed challenges did not lead to war, and in a recent analysis by Stephen Quackenbush (Quackenbush, *Understanding General Deterrence: Theory and Application*, 2011), general deterrence was studied without

²⁷⁷ Pages 468-9.

²⁷⁸ See pages 469-70.

²⁷⁹ See page 61. Note the emphasis was upon the deterrence failures among "enduring rivals" and explores years in which there were or were not overt armed challenges, highlighting any year with armed challenge as a "failure" and uncertainty whether *lack* of a failure was really general deterrence success (page 63).

exploring cooperative or conflictual behavior by the adversary or general deterrence in a time-series approach. The dissertation's research explored "gradients" in general deterrence and approached its statistical measurement through cooperative and conflictual behavior below the level of armed challenge or war.

Research Design

General Approach

Methodologically, in order to research or understand the impact of Japan's missile defenses (independent variable) upon cooperative and conflictual North Korean behavior toward Japan (dependent variables), the overall research design employed a mixed methods approach using both qualitative case-study analysis and quantitative statistical analysis. To ensure data quality in the research and writing of the dissertation, the research design considered the ideas and guidelines for qualitative and quantitative design and systematic data collection and evaluation found in *Designing Social Inquiry* (King, Keohane, & Verba, *Designing Social Inquiry: Scientific Inference in Qualitative Research*, 1994).²⁸⁰ Many of the research design features of the dissertation were informed by these guidelines.

Understanding the complexities of *general* deterrence—marked by the strategies and actions of some with provocations and coercion—is a challenge theoretically and practically. For example, it is far easier to recognize an "immediate deterrence" threat posed by the movement of large military forces to the border of an opponent, or of outright deterrence failure with an armed attack. Increasingly, threats are made and carried out at levels short of war—sometimes through the coercive or provocative use of ballistic missiles and the underlying threat they communicate.

²⁸⁰ See, for example, Section 1.2, "Major Components of Research Design," pages 12-28.

If two opponents are to create acceptable norms of behavior with each other, the first step is better understanding of each other, past behavioral interaction, and how different instruments of power such as BMD or other tools such as regimes and institutions contribute to deterrence and norm-setting. The dissertation sought to navigate these issues, for example, by: 1) exploring briefly the historical interaction between two actors, in this case Japan and North Korea—this essential background not only helped characterize the Japan-North Korea relationship in modern times, but helped identify possible alternative influences or variables to be considered later in the dissertation; 2) exploring deterrence theoretically and all the ways BMD might strengthen or undermine deterrence—this identified several possible ways in which Japan’s BMD could influence North Korean behavior under general deterrence conditions that could be considered in the qualitative and quantitative analyses; 3) constructing a theoretically-supported profile of North Korea as the “deterree” to help understand its people and leadership—this provided potential deterrence-oriented factors of value in North Korean leadership decision-making regarding security issues and analytic cues to how they might interpret Japan’s BMD program; 4) and, employing empirical data from a dataset tailored to Japan-North Korea interaction—analysis of these data permitted insights into changes in North Korean (as deterree) cooperative and conflictual behavior toward Japan and the role of Japan’s BMD in that interaction.

Thus, the historical background and literature review informed: how to construct a strategic profile of North Korea; how BMD might influence an adversary like North Korea; and, how a statistical framework could be constructed to support empirical analysis of Japan’s BMD program upon North Korean behavior over time under general

deterrence conditions. Information from the literature and profile was then drawn upon again to help explain the statistical findings and how possible North Korean perceptions regarding its coercion strategy vis-à-vis Japan, as reflected by empirically-based North Korean behavioral change, were affected by Japan's BMD. Concluding analysis in the final chapter revisited appropriate missile defense-deterrence theoretic arguments (excluding, for example, arguments dealing with U.S. national missile defense capabilities providing protection for nuclear retaliation in a conflict with a nuclear-armed opponent) in light of core North Korean decision factors from the strategic profile and statistical results from the quantitative chapter to offer summary inferences and insights.

Use of Mixed-Methods

In addition to the guidelines in *Designing Social Inquiry*, overall mixed-method design features included consideration of guidelines provided with the "Program Effects" case model application in order to enhance the quality of the data used and inferential analysis stemming from it (United States General Accounting Office, 1990). In such a design, a case is studied to assess and understand the effects of a program as well as reasons for the program's success or failure. In the case selected for the dissertation, Japan's missile defenses were the "program" and the "effects" determined were the cooperative and conflictual North Korean behaviors. Two distinct "design features" included combining qualitative and quantitative data and surveying before-and-after effects. Exploring the deterrent effect of Japan's missile defenses upon North Korean behavior in one period before the BMD program began in earnest, and in subsequent periods of its development, contributed to the body of knowledge on the effect of Japan's BMD program upon North Korean behavior using this mixed-method design.

Design criteria also considered ideas in *Designing and Conducting Mixed Methods Research* (Creswell & Clark, 2007).²⁸¹ For example, the timing of the research was sequential; in this case qualitative research was conducted first, then quantitative research. Second, weighting was ascribed to the quantitative data only. Third, research was mixed through “connecting” the qualitative and quantitative data, both in the quantitative analysis (Chapter Seven) and the final analysis (Chapter Eight). In this case, qualitative data was used both to provide contextual understanding of the adversary as well as explanatory analysis of quantitative data, thus strengthening the accuracy of the analyses and overall validity of the framework.

In using a mixed-methods approach, the dissertation used the strengths of each approach to compliment the other. The Strategic Profile provided essential background, helped with deductive inference and forming hypotheses, and provided information for comparison with the quantitative analysis. The empirical data in the quantitative chapter provided a means of statistical analysis based upon the hypotheses informed in part by the Strategic Profile. This helped to affirm the analysis from the Strategic Profile, strengthen some judgments or conclusions, and offer ideas for new data requirements or further empirical research.

Data Timelines

Japan’s BMD was explored in the dissertation across a 22-year period, starting approximately with the end of the Cold War and ending when Kim Jong-Il (KJI) died. Japan’s BMD program spanned about the last 13 and one-half years of the 22-year period. For the purposes of analysis, Japan’s BMD program was divided into four BMD-related decision points or meaningful periods of Japanese BMD development (described

²⁸¹ See especially Chapter 5: Introducing a Mixed Methods Study, pages 89-109.

below). The period was purposely structured to provide a baseline period prior to the four periods of significant BMD program activity as a means of comparison in keeping with a mixed-methods design, as well as to capture meaningful (but non-BMD-related) events and interaction in the baseline period. The BMD periods, combined with the baseline period preceding Japan's BMD program initiative, provided missile defense-related coverage to complement the dyadic Japanese and North Korean behavioral data in the 22-year dataset. Thus, all of the variables were expressed and analyzed in a time-series methodology, both in the qualitative and quantitative sections of the dissertation.

The period of time from January, 1990 to August, 1998 was included in the design to provide a baseline of Japan-North Korean dyadic behavioral interaction. This period provided a setting when Japan was not engaged actively in missile defense capability development despite aggressive North Korean ballistic missile growth and when missile defenses were proving of value elsewhere, such as in the Persian Gulf War. The first period of Japan's BMD examined (September, 1998 to November, 2003) explored North Korean behavior in the early stages of Japan's R&D efforts on missile defense. This activity was taken in response to the 1998 North Korean launch of a TD-1 long-range ballistic missile that flew directly over Japanese territory and surprised, even scared Japan's populace. The second period (December, 2003 to February, 2007) followed Japan's decision to actually acquire missile defenses of its own as opposed to an initial commitment limited to helping develop missile defense technologies in cooperation with the United States. This period included Japanese commitment of significant fiscal resources toward Japanese BMD acquisition. The third period of Japan's BMD program (March, 2007 to December, 2011) explored the period marking Japan's

first BMD operational deployment. The fourth period (February, 2009 to December, 2011) evaluated North Korean behavior during and following Japan's first field-deployment of BMD within Japan. This deployment included a stated intent of shooting down a North Korean TD-2 long-range missile in April, 2009 under certain circumstances. These four periods also served as the principal independent variables included in the statistical analysis.

Qualitative Methods

The design employed qualitative research in three basic ways in the dissertation. The first was the research of the Japan-North Korea relationship generally through exploration of their long-term historical interaction. The second way qualitative research was employed was in drawing final analytic judgments in combination with missile defense-deterrence theoretic arguments and statistical analysis (see Chapter Eight: Conclusions). Third, and requiring the most significant research effort, was an in-depth study of North Korea and its leadership since the behavior of North Korea as deterree was what mattered as the principal effect to Japan's BMD. The general goal in deterrence, as suggested by the *Deterrence Operations Joint Operating Concept* (U.S. Department of Defense, 2006), is to influence an adversary to decide to restrain from taking undesirable or egregious action against the one deterring or their interests in some way. In this case, Japan sought to use its BMD to deter North Korean coercive behavior toward Japan by countering the principal source of North Korean coercive power and strategy—its ballistic missiles. As stated above, North Korean behavior would not be expected to be either completely conflictual or cooperative. Instead, it moved in gradients of intensity over time. To understand the relationship of Japan's BMD and North Korean

behavior, it was important to understand the characteristics of North Korean leadership, their motivations and other decision-making factors, and how contextual circumstances and change, including development of Japan's BMD program over time, might affect their perceptions and, therefore, their actions (Payne K. B., *The Fallacies of Cold War Deterrence and a New Direction*, 2001).²⁸² Because of its length and construct, a more detailed description of the Strategic Profile is provided below.

North Korea Strategic Profile

A strategic profile provides an overview of a state from a deterrence perspective. It structures one's understanding of an adversary, its leadership, and the factors that matter in its national security-related decisions in keeping with the deterrence-related literature. Specific to the dissertation, the strategic profile was intended to aid in drawing some general conclusions about the Japan-North Korea relationship, but more specifically the effects of Japan's missile defenses on North Korean leadership decision-making and behavior.

A strategic profile provides a qualitative perspective of a deterree, though views vary over its precise contents.²⁸³ Constructed, in part, upon Keith Payne's empirically-based approach (Payne K. B., *The Fallacies of Cold War Deterrence and a New Direction*, 2001),²⁸⁴ and incorporating many of the theoretically-based ideas of others (i.e., McVicar, Mendelsohn, Post, Huth and Russett), the dissertation's strategic profile provided more than just a review of North Korean military capabilities or personal quarks

²⁸² See Chapter 5, "The Dilemma of Popular Usage and a New Direction," pp. 97-114.

²⁸³ Bruce Bueno de Mesquita and Rose McDermott, for example, emphasize the importance of human emotions in leadership decision-making, though they raise more questions than they answer and offer no insights on these ideas for deterrence (Bueno de Mesquita & McDermott, *Crossing No Man's Land: Cooperation from the Trenches*, 2004).

²⁸⁴ Pages 102-14.

of its leader.²⁸⁵ Payne emphasized the need to consider certain adversary characteristics, such as their rationality, motivations, goals, value and risk structure, regional security context, and sources of power, among others. Huth and Russett employed an approach based upon levels of analysis and incorporated various internal and external environmental factors of an adversary state (Huth & Russett, *General Deterrence between Enduring Rivals: Testing Three Competing Models*, 1993).²⁸⁶ Post emphasized various psychological factors that complimented, if not expanded upon, considerations of the personal aspects of an adversary leader described by Payne and Huth and Russett (Post J. M., 2003).²⁸⁷ Most of these factors were addressed in the profile, along with other information and other categories provided by other sources.

Emphasis in the strategic profile was on those areas in which national security-related beliefs and perceptions of North Korea's leader emerged in its state-level behavior—interaction that might be relevant in context of the North Korean political strategy of coercion and the emergence of Japan's BMD program. Substantive sections of the strategic profile were organized as follows: a review of the identity and cultural factors of North Korea's people, providing historical insights to their national values and how those values might inform the security-related political culture of North Korea's top leaders; the cognitive and psychological factors that informed Kim Jong-Il (KJI) as the primary decision-maker in North Korea in the period explored in the dissertation;²⁸⁸ and, key internal and external environmental factors of the North Korean state and how KJI

²⁸⁵ See: (McVicar, 2011); and, (Mendelsohn, 2003).

²⁸⁶ See, for example, their framework description (page 64) and brief discussion of psychological models (pages 67-8). These factors departed in many ways from traditional rational choice theory as did Payne's ideas. See also: (Huth & Russett, *Testing Deterrence Theory: Rigor Makes a Difference*, 1990).

²⁸⁷ See also: (Post J. M., 2004).

²⁸⁸ KJI was the focus of this section of the strategic profile. KJI died 19 December, 2011.

may have interpreted those factors in his decision-making. The leader, ultimately, then, was the focus of understanding for deterrence purposes since: he was the top decision-maker for national security-related decisions; he was the one whose personal psychological factors might play upon state decisions; he was the one who reflected the national identity and culture of the people; and, he was the one who ultimately interpreted changes in environmental factors, such as changes in Japan's BMD program over time.²⁸⁹ The North's relations with Japan were also revisited to address the strategy of North Korea toward Japan and political rapprochement. KJI's interface with internal and external environmental factors was consistent with his personal and national identity and cultural factors. Because of the length of the material presented the Profile was divided into two chapters: the first two substantive sections (Identity & Cultural Factors, and Kim Jong-Il Personal Factors) comprised Chapter Five: Strategic Profile – Part I; the third substantive section (Environmental Factors) comprised Chapter Six: Strategic Profile – Part II.

Qualitative Analysis

A strategic profile requires a great deal of information dealing with a potential adversary. Without access to primary sources in their original language, such as private conversations between Kim Jong-Il and his advisors in Korean, one might suggest insufficient information was available to research and analyze North Korea. However, research found that a great deal of information about North Korea, its capabilities, intentions, and leadership sentiments was available in a wide array of other sources, such as: U.S. and allied government reports; legislative research reports; third-party

²⁸⁹ See the author's chapter entitled, "Can Tailored Deterrence and Soft Power Succeed Against the Long-Term Nuclear Proliferation Challenge" (Lowther, 2012); pages 75-96.

governmental reports or diplomatic statements; North Korean official news media; North Korean communities and related media outlets in Japan; reports from visitors to North Korea, such as members of international organizations, non-governmental organizations, foreign dignitaries, and private citizens; reports from government and private research entities, such as Federally Funded Research and Development Centers (FFRDCs); information provided by scholars and analysts who have studied North Korea over time; or, accounts from North Korean defectors.

Further, the notion of insufficient public-domain information is not strong when one considers the role of information technologies in making vast amounts of information available today, including reports translated into English using automated software tools, providing significant insights into a potential adversary through information available in the public domain. The strength of public-domain, or “open-source,” information was acknowledged by U.S. Intelligence Community leaders. For example, in 2007, Mr. James Clapper, Under Secretary of Defense for Intelligence, in describing his years of experience in the U.S. Intelligence Community said, “And many times, the most important insight, the most important and relevant information, is not in the secret material; it’s open-source” (Office of the Director of National Intelligence, 2007).²⁹⁰ More recently, Dan Butler, Assistant Deputy Director for Open Source, at the Office of the Director of National Intelligence, said, “Open source is research. It’s good research. It’s rigorous and disciplined research. And I could give you a lot of good examples of how our intelligence community back in the 1940s and 1950s was built on a very solid foundation of what today we call open source intelligence, or open source exploitation. Back then we called it research” (Office of the Director of National Intelligence,

²⁹⁰ Page 48. Remarks made 6 September, 2007.

2010).²⁹¹ Research to support development of the dissertation's strategic profile was informed by several inputs from the deterrence theoretic arguments on understanding adversaries (such as Keith Payne's framework) and research stemming from approximately 200 books, a number of academic articles, and other material available in the public domain described above. As voiced by leaders of the U.S. Intelligence Community, extensive information of use for national security-related research and analysis was available in the public domain. Research for the dissertation found extensive information on North Korea that fit into the areas of the strategic profile.

Quantitative Methods

Acquired Dataset

The dataset acquired for the dissertation was provided by Dr. Doug Bond and Virtual Research Associates, Inc. (VRA®) at the request of the author. Doing so provided a single dataset that used the same data sources and tagging methodologies, substantially increasing data reliability.²⁹² The dataset was titled "Events Data 1990-2011."²⁹³ Data represented monthly summaries of daily IR-related events and interactions and were

²⁹¹ Page 5. Remarks made 17 June, 2010, at The National Press Club, Washington, D.C. He added, "The game changer was the Internet. We are in the Internet age. Today, in 2010, we're grappling with a capability that is a tremendous force for good, as we have all experienced, I'm sure, and it can be used against us. It can be used against our national security. It can be used against our families. So it's a typical double-edged sword, a tool that can be used for good or for evil, and it's a tool that we have to figure out how to exploit best. The Internet has transformed the open source universe."

²⁹² Further background on the reliability of VRA's methodologies can be found in Doug Bond, et al (Bond, Bond, Oh, Jenkins, & Taylor, 2003), especially pages 739-42; Gary King and Will Lowe (King & Lowe, An Automated Information Extraction Tool for International Conflict Data with Performance as Good as Human Coders: A Rare Events Evaluation Design, 2003); and, Daniel Hopkins and Gary King (Hopkins & King, 2010).

²⁹³ The dataset was derived using VRA® Reader v. 3.11.0., proprietary software used to search large amounts of digital news reporting. Further information on the company is found at <http://www.vranet.com>. Data were provided in Microsoft Excel spreadsheet form in three basic sets of information: monadic; dyadic; and, BMD terms. The database acquired from VRA for the dissertation research is here and throughout the dissertation entitled, Events Data 1990-2011 (2012). The parameters of the data were agreed upon with the dissertation chair prior to final acquisition of the purchased dataset from VRA.

gathered through automated software capabilities and derived from either Reuters or AFP (Agence France-Presse) news sources. VRA used Reuters news articles for data encompassing the entire dataset period (1990-2011) and AFP was added to supplement Reuters data from 2002-2011. The dataset provided both monadic and dyadic content. Monadic data reflected IR events or actions originating from one state and were not specifically tagged to any other state. Dyadic data were IR events between two states and tagged as directional in nature, such as Japan made a public statement directed at North Korea. Monthly data were collected from news reports scanned using VRA software for the period 1/1/1990 through 12/31/2011 (22 years). Each event or action in the dataset was derived through automated content analysis of daily newswire reports using a scoring process called Integrated Data for Event Analysis (Bond, Bond, Oh, Jenkins, & Taylor, 2003).²⁹⁴ IDEA built on the World Event Interaction Survey (WEIS) and its behavioral scoring methodology originally developed by Charles McClelland (McClelland, 1999). This methodology relied on a “who did what to whom, when and where” approach to international interactions. Each event was assigned a weight based on the level of behavioral cooperation or conflict inherent in the action or statement. IDEA incorporated nearly all events covered through the original WEIS coding while adding fidelity. Aggregates for each month (by each state) were compiled for IDEA event form codes 1-22, inclusive. These codes included both cooperative (cue categories 1 to 10) and conflictual (cue categories 11 to 22) events (see the section below entitled “Behavioral Scale” for a description of these categories and the weighting scheme used).²⁹⁵ The dataset also included data for subcategories, monthly averages, and cumulative scores

²⁹⁴ Pages 733–45.

²⁹⁵ See Appendix 1: Methodology Historical Background, page 337, for development of this methodology.

(totaling 72 different categories). The geographic scope of the data, chosen by the author, included 10 countries: Australia, China, Iran, Japan, Libya, North Korea, Russia, South Korea, Syria, and the United States (Events Data 1990-2011, 2012).²⁹⁶ Six of these states (Japan, North Korea, South Korea, China, the United States, and Russia) represented six regional powers commonly engaged in negotiations with North Korea regarding its nuclear weapons program (i.e., the Six Party Talks) and which had a history of interaction, including conflict, in the region. Australia was selected as another important regional actor that also interacted with all of the other six regional actors, including some interaction with Japan with regard to BMD issues (The National Bureau of Asian Research, 2008).²⁹⁷ Three other countries (Iran, Syria, and Libya) are states with which North Korea had proliferant relations including ballistic missiles and nuclear technologies.²⁹⁸

²⁹⁶ See the worksheets labeled “Monad Notes” and “Monadic Monthlies.”

²⁹⁷ See page 11 where BMD, including joint exercises, is described as a common goal for the U.S., Japan, and Australia within the Trilateral Strategic Dialogue. See also: (Frühling & Schreer, 2012). These authors, senior lecturers at the Strategic and Defence Studies Centre, Australian National University, argue, for example, in this opinion piece, “What should Australia do? As a start, the government should reinforce its political support for international missile defence co-operation—not only through words but through practical exercises with the US and its regional allies, especially Japan.”

²⁹⁸ Research of the quantitative design first considered use of data from the Gary King Dataverse for North Korean and Japanese activity for the early periods to be researched (King & Lowe, 10 Million International Dyadic Events, 2003). This dataset, produced by Dr. Doug Bond and Virtual Research Associates, Inc. (VRA®), represented monthly summaries of daily IR-related interactions between Japan and North Korea taken from Reuters news reports from 1990-2004. These data were organized around various Country Dyads and provided information well-suited for the dissertation. See also Ross Miller, et al, for a recent application of dyadic behavioral variables in the case of the U.S. and South Korea (Miller, Bowdish, & Kim, 2012). This dataset, however, did not capture more recent events of interest to the dissertation given significant development of Japan’s BMD program after 2004. As a result, either supplemental data or an entirely different dataset would be required for the dissertation. To capture data from January, 2005 to December, 2011 one option was to access a single news source in order to be consistent with the use of a single news source (Reuters) used in Gary King’s “Dataverse” for the preceding research period of the dissertation (1990-2004). Data were considered from one of the news service electronic archives with daily archives available (and searchable) online through the UNL “America’s Newspapers” database of Primary Sources, or the “LexisNexis Academic” database of electronic news sources. Hand-coding would have been required of these articles. Overall reliability would have been challenging, though it could have been maintained since hand-coding would have been taken from a single well-established, news source

Monadic Data.

Monadic data reflected IR events related to one of the 10 state actors regardless of whether those events were correlated to another actor irrespective of whether that actor is one of the 10 principal states. The dataset included 2,640 months of summaries of monadic event data among the 10 states. The information for these summaries was very detailed but not directional toward any specific country. There were a total of 6,121,511 events represented by these 2,640 months of event summaries in the monadic data.

Dyadic Data.

The second set of data was dyadic, where the unit of analysis was monthly dyadic scores for cooperative and conflictual behavior between two states.²⁹⁹ Data were also collected from 1/1/1990 through 12/31/2011 (22 years) and included the same 10 countries as in the monadic data. Dyadic data reflected *directional* behavior from one of the 10 states toward another of the 10 states. Directional data included a numeric count of events and a cumulative score for each month (on the Goldstein scale); the numeric counts and cumulative scores provided both cooperative and conflictual directional behavior. These types of data were recorded for each state against the other nine states. The weighted sums accentuate high intensity actions (Virtual Research Associates, Inc. (VRA), 2012).³⁰⁰

and required of only one case (Japan-North Korea) and in a limited timeframe (2005-2011). However, this would have taken considerable time.

²⁹⁹ A sample of dyadic data from the dataset is seen in Chapter Seven: Quantitative Analysis (Figure 3). Unlike the monadic data, with 72 different categories and subcategories, dyadic data included eight categories for each entry: the name of the source state (SrcName); the name of the target state, or state-level object of the source-state's behavior (TgtName); the year of the entry (Year); the month of entry (Month); the Goldstein Positive Case numeric count (GPCount); the Goldstein Positive Cumulative weighted score (GPCum); the Goldstein Negative Case numeric count (GNCount); and, the Goldstein Negative Cumulative weighted score (GNCum).

³⁰⁰ See the worksheets labeled "Dyad Notes" and "Dyadic Monthlies (Non-Null)." Some months had no data as there were no reports in those months for this dyad. In these cases, to facilitate regression

There were 60,789 months of event summaries in the dyadic events data for the 10 state actors. These events included both cooperative, positive directional dyadic data as well as conflictual, negative dyadic data. There were some months in some dyads that had no events identified, and there are many months with multiple events. There were a total of 237,759 dyadic events in the dataset: 167,763 cooperative, positive events within the monthly summaries; and, 69,996 total conflictual, negative events recorded. In the dyad of key interest for the dissertation (Japan and North Korean dyadic interaction) there were a total of 1,932 dyadic events across the 22-year dataset: 1,181 events of Japanese behavior toward North Korea (713 cooperative, positive events and 468 conflictual, negative events); and, 751 events of North Korean behavior toward Japan (443 cooperative, positive events and 308 conflictual, negative events).

BMD Events.

A third set of data provided in the VRA dataset was comprised of specific news reports in the 22-year period that searched out specific terms in the Japan-North Korea dyadic relationship in order to ensure all reports were accounted for that dealt with Japan's BMD. These data also provided summaries of the contents of the news reports themselves, a valuable feature not available in the monadic and dyadic data. Since the methodology used by VRA to identify reports of dyadic significance used the scanning of only the first two sentences of all available reports, it was possible some data containing largely BMD-specific references were omitted if that term was not used in the first two sentences of the report. Therefore, a supplemental data search was conducted to avoid

analysis, new worksheets were created by copying the dyadic sheet and manually adding months to the data. A zero (0) was added to any monthly record created having no original data. Thus, a complete time-series set of data was available with all months represented across the 22-year dataset period—a prerequisite for meaningful regression analyses. Figure 3 reflects the original dataset plus some months with 0s added to complete the year.

this gap.³⁰¹ These data strengthened the reliability of the dyadic interaction and were used to construct a variable (described below) to aid in statistical analysis.

Behavioral Scale

Description.

As a standard for identifying the cooperative and conflictual behavior and measuring such behavior intensity on a scale of action or restraint conducive to deterrence, quantitative data in the dissertation used the categories of political events and interactions identified in the Integrated Data for Event Analysis (IDEA) framework (Bond, Bond, Oh, Jenkins, & Taylor, 2003) which built on the World Event Interaction Survey (WEIS) (McClelland, 1999). Broad event categories (a total of 22) ranged from cooperative, positive categories of interaction (i.e., yield, comment, consult, approve, promise, grant, reward, agree, request, and propose) to conflictual, negative event categories that were increasingly negative until they reached pre-war conditions (i.e., reject, accuse, protest, deny, demand, warn, threaten, demonstrate, reduce relations, expel, seize, and force). There were more specific events (100+) under most of these broad event headings. Each category was assigned a weight according to the Goldstein scale.

The Goldstein scale was developed to provide placement of international events that were categorized by Charles McClelland in the World Event/Interaction Survey (WEIS) onto a negative/conflictual-positive/cooperation scale. This scale has a numeric value range from -10.0 (conflictual interaction bordering/starting war) to +8.3 (cooperative interaction associated with close partnerships or alliances). While the WEIS categories provided a meaningful “ladder” of international dyadic interaction, the

³⁰¹ These supplemental data are described further in Chapter Seven: Quantitative Analysis.

Goldstein scale adds intensity weights that capture the direction and levels of interaction more appropriately and with greater utility in making comparisons (Goldstein, 1992).³⁰² A summary of Goldstein's application of weights to WEIS events is provided in Table 8 at the end of Chapter Seven.

According to VRA, the weighted sums of the events in the dataset accentuated high intensity actions while the counts assumed all actions were equal. VRA suggested using the weighted sums on both positive and negative polarities, which was done for data used in the regression models. Averaging the positive and negative polarities together was discouraged as positive and negative actions were not necessarily inversely related (i.e., a +3 was not necessarily the same level of positive behavioral intensity that a -3 was of negative behavioral intensity). Some averaging was done in Chapter Seven: Quantitative Analysis, however, among groups of positive events and, separately, groups of negative events. This was done to further analyze one particular month's events of the same polarity, for example, rather than comparing cumulative weighted scores since these varied widely in month to month comparison. This method complied with VRA's theoretic structure for utilizing the data provided in the dataset.

Variables

Dependent Variables.

Two dependent variables were used: one for *positive, cooperative* North Korean behavior toward Japan and one for *negative, conflictual* North Korean behavior toward Japan. These dependent variables account for the "effect" of Japan's BMD "program" as described above in the mixed-method design description. There were several advantages to this approach. First, there existed technologies through VRA, for example, that could

³⁰² See pages 376-7. See McClelland (1999) for the original 1978 article describing WEIS.

search, sort, and assemble structured datasets with both monadic and dyadic features. The interaction between two states, such as Japan and North Korea, created a relatively large number of media-reported events identified by VRA. The data were expressed both in a *directional* form (i.e., the event was behavior from Japan toward North Korea), but also typed as either cooperative, positive behavior or conflictual, negative behavior. Further, VRA's processes assessed a weight, or level of intensity for each event, using the Goldstein scale described above, indicating just how cooperative or conflictual the event was on a scale.

The dependent variables were also chosen in order to provide direction of behavior (cooperative, positive and conflictual, negative behavior) as a measure of the deterring effects of Japan's BMD. In this way, *criteria for deterrence effectiveness* were identified as follows: increases in cooperative, positive North Korean behavior toward Japan during a specific BMD period indicated Japan's BMD strengthened deterrence; decreases in conflictual, negative North Korean behavior toward Japan indicated Japan's BMD strengthened deterrence during that BMD period; decreases in cooperative, positive North Korean behavior toward Japan during a specific BMD period indicated Japan's BMD undermined deterrence; increases in conflictual, negative North Korean behavior toward Japan indicated Japan's BMD undermined deterrence during that BMD period; and, no statistically significant changes in North Korean behavior toward Japan during a specific BMD period indicated Japan's BMD had no deterrent effect during that BMD period. Analysis of these data using these criteria indicated the deterrent effects of Japan's BMD program over time; however, the inferences drawn from these analyses cannot prove decisively that Japan's BMD caused certain deterrent changes in North

Korean behavior. However, the methods and results used in this design provided improvement in better understanding how BMD may have affected North Korean thinking and behavior, as well as methodological advancement in addressing general deterrence challenges in a time-series framework.

Independent Variables.

The primary statistical models included those variables specific to Japan and its BMD program. This set of variables was applied to all but one initial model in the regression analyses. Applying these variables to the other variables allowed analytic comparison with other, non-BMD-related independent variables. The first variables included cooperative and conflictual Japanese behavior toward North Korea. As with the dependent variable, the Japanese behavioral variables used the Goldstein weighting scale described above and reflected the cumulative monthly intensity of all interactions that month. Including both components of Japan's interaction with North Korea in a single regression model was an essential step in providing a statistical foundation upon which to add the BMD-related variables of Japan's interaction with North Korea. As with the dependent variable, data for these dyadic behavioral variables come from the VRA-provided database (Events Data 1990-2011, 2012).³⁰³

A variable was also included in the primary regression models reflecting the supplemental BMD-related data provided in the VRA dataset (see the section "BMD Events" above). This dichotomous variable did not reflect positive or negative behavioral direction, nor the cumulative weighting on the Goldstein scale, as the dyadic cooperative-conflictual behavioral variables did. The months in which these terms appeared in the

³⁰³ See the worksheet "Dyadic Monthlies (Non-Null)."

data across the 22-year dataset were tagged to create a variable ensuring all Japanese BMD activity in the data was captured within the statistical analyses.

Lastly, as mentioned above, there were four dichotomous independent variables that reflected the emergence of Japan's BMD program over time. One variable was created for each of the four periods of Japan's BMD program. The first BMD variable represented the time period of September, 1998 through November, 2003—the period immediately following the 31 August, 1998 TD-1 missile launch that overflew Japan. The second BMD variable represented the time period of December, 2003 through February, 2007—beginning with Japan's choices and commitments relating to acquisition and deployment of its own BMD system. The third BMD variable represented the time period of March, 2007 through December, 2011—the first deployment of operational BMD that occurred in Japan (March, 2007) and extending to the end of the timeframe considered since Japan's BMD deployment did not cease. The fourth BMD variable represented the time period of March, 2009 through December, 2011—the first time Japan placed operational BMD assets on a ready alert status in preparation to engage (shoot down) a North Korean ballistic missile; North Korea warned UN civil aviation and maritime agencies of the impending launch which occurred on 5 April, 2009 (a modified TD-2 missile).

Control Variables.

In evaluating the effect of Japan's missile defenses on North Korean behavior, the research employed various models that controlled for rival explanations in the statistical analysis. This provided data dealing with Japan-North Korea interaction for statistical analysis, but isolated from other variables. These control variables included: cooperative

and conflictual U.S. behavior toward North Korea; cooperative and conflictual South Korean behavior toward North Korea; cooperative and conflictual Chinese behavior toward North Korea; two periods of political rapprochement between Japan and North Korea (in the early 1990s, and again in the early 2000s); and the political parties of Japan, South Korea, and the United States. The cooperative and conflictual behavioral variables used the Goldstein weighting scale described above. These variables addressed the potential impact of other key actors in the region, changes in their political parties that could result in policy changes toward North Korea, and the dynamic of significant interaction between Japan and North Korea through political normalization talks. These variables were controlled statistically in regression models evaluating both dependent variables as well as the BMD-specific independent variables. As a result, they aided in isolating the influence of Japan's BMD over time in effecting North Korean cooperative and conflictual behavior toward Japan. In all cases, North Korean cooperative and conflictual behavior toward Japan remained the dependent variables. Qualitative data were then incorporated to provide further analysis of the statistical results or support explanations of the quantitative data.³⁰⁴

Data constructed with the Goldstein directional and weighting scale scheme (Goldstein, 1992) were particularly useful in addressing dyadic relationships under general deterrence conditions as they provided "gradients" of behavioral change. Further, these data could be collected and assembled within datasets on a monthly basis to enable added granularity in behavioral interaction. Detailed, monthly cooperative-conflictual behavioral interaction in a dyadic relationship, such as the Japan-North Korea relationship, especially in a time-series study, served as a very good baseline of

³⁰⁴ Analysis used qualitative research techniques taken from Jack Levy's qualitative approach (Levy, 1986).

independent and dependent variables from which statistical analysis was supplemented by other independent variables of high interest—such as Japan’s BMD. Adding BMD variables—while controlling for other influences (i.e., the control variables)—permitted the effects of Japan’s BMD program to be measured by changes in the cooperative and conflictual North Korean behavior toward Japan. This also provided statistical analysis of each period of BMD development so that the direction of North Korean cooperative and conflictual behavior toward Japan was analyzed for deterrence effects. The results of each period were analyzed further with qualitative data and then compared one with another.

Quantitative Analysis

The purpose was to evaluate the effect of Japan’s missile defenses on North Korean behavior. To do this, a 22-year database was compiled and regression analysis conducted using publically-available statistical software for all months from 1990-2011. These data were crafted into discrete models reflecting Japanese cooperative and conflictual behavior toward North Korea and Japan’s BMD variables reflecting the four periods of BMD development. The control variables were then analyzed in separate regression models. All data results were displayed in activity tables for comparison. Analysis provided the following results: which BMD variables were statistically significant in correlation with North Korean behavior toward Japan in each period; whether it was cooperative or conflictual North Korean behavior that changed; and, the direction of behavioral change indicated in the statistical analysis inferred by Japan’s BMD. Statistical analysis was an important component of the dissertation’s goal of trying

to understand the effects of Japan's BMD upon North Korean behavior in general deterrence conditions.

Analytic Tool.

The regression and other statistical analyses were performed using the *gretl* software package, available online (Cottrell & Lucchetti, 2012). This software interfaces with a variety of data spreadsheets including Microsoft Excel—the format in which the dissertation's database was constructed. All regression analyses and related statistical tests, such as tests for serial correlation, for example, were conducted using *gretl* software.

Alternative View.

An alternative perspective on Japan-North Korea relations may be that the Japan-North Korea relationship could not be analyzed in isolation or as a stand-alone case. Perhaps KJI focused only on the U.S. and saw Japan and South Korea only as mere U.S. puppets. In this construct, North Korean behavior would have been driven by U.S. behavior and KJI's belief that he needed ballistic missiles solely as a means to make a credible nuclear deterrent against aggressive U.S. action.

This proposition may have been stronger in the Cold War era. However, things have changed politically and militarily in the region, including: North Korea's loss of the Soviet Union as a dominant political, military, and economic sponsor; the rise of Japan as a world economic power; the significant rise of ROK conventional capabilities; the decline of U.S. relative position in the region indicated by removal of its tactical nuclear forces from the region in the 1990s and the near-term plan to transition operational control of combined military forces on the peninsula to the ROK government; and,

Japan's substantial growth in BMD investment, technology, and deployed capabilities. Since the 1990s, of necessity the North Korean strategy was no longer a U.S.-only approach. Instead, it was multi-dimensional, emphasizing political coercion of regional actors with ballistic missiles, and the U.S. strategy component focused most intensely on North Korea's possession of nuclear weapons to deter U.S. attack and regime change. Further, U.S. extended deterrence security guarantees, since they are neither expressly nor incidentally intended to deter North Korean behavior in periods short of war (Takahashi, Ballistic Missile Defense in Japan: Deterrence and Military Transformation, 2012),³⁰⁵ are likely perceived in North Korea in the same way—that is, germane in wartime conditions. As such, North Korea's coercion strategy was aimed at interaction with regional actors below the threshold of armed conflict. Lastly, if the U.S.-only thesis had been the case, then there would either have been no effect of Japan's BMD on North Korean behavior, or there would have been a high correlation in the statistical analysis of U.S. behavior as a control variable for Japan's BMD. However, the statistical analysis indicated Japan's BMD were important variables in effecting both cooperative and conflictual North Korean behavior toward Japan, while the U.S. behavioral control variable was not a statistically significant factor in the effects of Japan's BMD.

Analytic Integration

Statistical findings and qualitative contextual analysis from the strategic profile case study were considered with various missile defense-deterrence arguments from the Literature Review. This was done to explore further insights into possible explanations for North Korean cooperative or conflictual behavior short of war in light of Japan's decisions and activities with its missile defense program. This involved comparing

³⁰⁵ Page 23.

qualitative analyses of North Korean characteristics found in the strategic profile, coupled with additional qualitative data as necessary on North Korean activity as characterized in missile defense-deterrence theoretic arguments, with quantitative statistical analysis data in order to better understand Japan-North Korea dyadic interaction.

CHAPTER FIVE: STRATEGIC PROFILE

PART I—IDENTITY & CULTURE AND PERSONAL FACTORS

Executive Summary

A strategic profile, unlike a general country study that provides a geographical overview of a state, seeks to provide a meaningful order to understanding an adversary, its leadership, and the factors that matter in their national security-related decisions. For the dissertation, the strategic profile, in keeping with the deterrence-related literature, is intended to aid in making judgments about the Japan-North Korea political relationship generally and the effects of Japan's missile defenses on North Korean leadership decision-making and related behavior specifically.³⁰⁶

Research of the North Korea leadership strategic profile found a leadership regime that was pragmatic and rational, but acted through a decision-making lens that ascribed to a value system consistent with its history, culture, and ideology. This value system, though very different from that in recent experience in the U.S., permitted North Korean leaders to treat its people and neighbors in an instrumental and sometimes violent way. In a return of Korea's royal legacy, the Kim dynasty of North Korea sought to avoid reruns of intervention, invasion, and occupation, whatever the cost, including unaided advancement of the nation, though large amounts of aid is precisely what was needed in some cases. This view of security placed a premium upon the military instrument for defense and plans of forced Korean reunification and, more recently, the development of ballistic missiles and WMD to threaten and coerce its opponents in their own heartlands. The personal traits of the Kim leaders facilitated this interpretation of domestic and

³⁰⁶ These judgments will be provided in Chapter Seven: Quantitative Analysis, culling information provided elsewhere in the dissertation, but principally the two Strategic Profile chapters.

external security environments, using cooperative and conflictual behavior, consistent with the North Korean revolutionary past, to create an image of a nationalistic, even dangerous, state. This image perpetuated North Korean security goals with regional actors and helped placate domestic audiences, though it may not be discernible when this image reflected genuine emotions or was simply being orchestrated. Personal pride, intermingled with national honor, however, occasionally led North Korea's leaders to take actions probably motivated more by desires to save face and avoid inconsistencies than to achieve strategic political or economic goals. Personally, KJI may have been malleable to environmental influences—at least in his relations with Japan—including the deterring effect of Japan's BMD.

Japanese decisions on BMD came as a result of North Korean patterns of behavior with its missiles and other instruments of power. However, while North Korean intentions for developing missiles that could threaten Japan may have been intended, in part, to strike U.S. forces throughout Japan in context of general war on the peninsula, the residual problem was that U.S. extended deterrent actions and capabilities did not address North Korea's new strategy of political coercion that paralleled its rapid development and deployment of its longer-range ballistic missiles that could range Japan. This meant Japan's BMD, while adding to the defensive suit of capabilities needed in general regional war, also appear to have been the greatest variable affecting North Korean political coercion behavior toward Japan in the context of relations short of war. The elements of the strategic profile reflect various qualitative data that suggests North Korea could, and perhaps did, modify its perceptions of coercive or conflictual behavior toward Japan over time.

More specifically, Japan's BMD directly undermined North Korea's ballistic missile capability—a core value central to North Korea's post-Cold War deterrent security strategy and capacity to coerce others. However, KJI did not view Japan's BMD in the same fashion as offensive strike forces, such as those possessed by the U.S., that could preemptively decapitate KJI's regime, inflict personal harm upon him and his family, and destabilize if not threaten the survival of the North Korean state as it existed under KJI. Further, KJI had much to gain from the prospects of normalization of relations with Japan—rather than the result of coercion—including substantial amounts of direct monetary infusion and investment. Japan's BMD did not deny KJI the option of building and using a new missile test facility in which it could still advance its space and ballistic missile technologies by flying southerly trajectories. Further, KJI's perceptions regarding Japan's BMD included considerations of China, the U.S., and various other effects of the development of BMD in Japan over the course of several years. Some of these effects included: an extension to North Korea's ballistic missile test moratorium; substantive normalization talks; fears of a Japanese offensive arms buildup; complications to North Korean missile-related activities or war plans; use of surprise tactics; Japan's defenses were not aggressive or ambiguous; North Korea could simply build or use more ballistic missiles, go around defenses, or use alternative means of delivery, coercion, or attack; and, failures to deter North Korean nuclear and ballistic missile tests.

Background and Contents

A strategic profile provides a qualitative perspective of a deterree. There are a number of views as to its contents, though it is less debated as to whether the deterrer should research and develop an adversary profile. In an effort to provide a more

empirically-based approach and reduce uncertainties in deterrence analysis and strategy-building, Payne suggested a two stage methodology of (1) developing a detailed understanding of the adversary; and then (2) orienting the deterrer's capabilities and deterrence-oriented actions to influence the factors known about the adversary and his decision-making. Payne argued for identifying those elements critical to the adversary leader's decision-making, including: leaders' motivations; decision-making processes; sources of regional friction; contextual lessons of history; how they view others in the region; and national capabilities (Payne K. B., *The Fallacies of Cold War Deterrence and a New Direction*, 2001).³⁰⁷

³⁰⁷ Pages 102-14. According to Payne, other specific elements of adversary characteristics needed as part of a deterrence strategy include: assessment of a leader's rationality or predictability (i.e., perhaps based upon past history, domestic political pressures, or ideological factors; also involves senior leader physical or mental health, drug addictions, or other psychological factors limiting or distorting perceptions of reality and rational behavior); leadership (i.e., key decision-makers, their personal will or determination, motivations, constraints on behavior); familiarity and focus (i.e., are they aware of and do they understand the deterrer's goals, actions and policies); communication (i.e., methods for communicating with North Korean leadership); values and risk structures (i.e., what the North Korean values are and how the deterrer's capabilities or strategy squares with those values; regime core values such as regime survival, regional power relations, commitments from culture, ideology, or religion; tolerance to risks); options (i.e., the options it believes are available in response to the deterrer's capabilities, such as conciliation or conflict); precedent or credibility (i.e., whether North Korea senses a demonstrated commitment from the deterrer to address the North Korean threat); opportunities for learning (i.e., whether North Korea has communicated with the deterrer in the past); priorities and value trade-offs (i.e., which values are paramount to North Korea regarding pursuing their interests in light of the deterrer; how that choice might affect other North Korean political or economic goals; whether provocation is better than conciliation); and, deterrer regrets and policy options (i.e., how North Korea perceives deterrer options if North Korea is conflictual; how conflictual behavior might affect North Korea's freedom of action). Jerrold Post also provided an excellent conceptual framework for profiling political leaders, with an emphasis upon their personalities. The essential categories included: the leader's psychobiographic information, including cultural and historical background; his personality traits, including such things as cognitive complexity, emotional reactions, and motives of leadership; his worldview, such as ideology and sense of nationalism; and, his style (Post, *The Psychological Assessment of Political Leaders: With Profiles of Saddam Hussein and Bill Clinton*, 2003); in his chapter, "Assessing Leaders at a Distance: The Political Personality Profile," pages 102-4. Also see another Post book that expands these ideas further (Post J. M., 2003); pages 102-4. These sources provide details helpful in any North Korean leader profile. Some information needed in a North Korean strategic profile may not be available or may be of questionable confidence. As such, it cannot, nor can any other adversary leader strategic profile, be used to ensure deterrence success. Understanding an adversary is crucial to a deterrence strategy, but in no way does it, or any assembly of robust military capabilities, guarantee an adversary will be willing to acquiesce to a deterrer's efforts. Measures taken to prepare for deterrence

In addition to Payne's outline, others provide valuable insights also needed to create a more complete picture and profile. For example, deterrence analyst Michael McVicar provides an excellent synopsis of the rationale and ingredients of modern deterrence-focused adversary leadership "strategic profile" information. In his qualitative approach, McVicar provides six broad categories of information essential to adversary leadership strategic profiles, including: historical, ideological, and cultural influences; conditions and beliefs; leadership characteristics; decision-making structures and processes; strategy and doctrine; and, key uncertainties (McVicar, 2011).³⁰⁸ Mendelsohn brings further specificity to a profile outline by suggesting deterrence also consider the opponent's: military and economic power; geostrategic position; type of regime; internal dynamics such as level of cohesion; cultural-social characteristics; and, how national identity affects top leader decision-making (Mendelsohn, 2003).³⁰⁹ Further, the framework used by Paul Huth and Bruce Russett in understanding deterrence relationships importantly considered an opponent's environmental levels of analysis that informed their leadership's decision-making. These were comprised of traditional balance of power indicators emphasizing the military component of power, along with internal or

failure, therefore, are prudent despite the development of an empirically-based method of adversary understanding, such as this type of profile. Page 110.

³⁰⁸ Pages 6-8. McVicar argues profiling is essential to more detailed adversary decision calculus assessments which, in turn, serve as the focus for a defending state's "tailored" deterrence planning. Profiles aim to capture, with the material available, the "key factors" that inform how an adversary might value or weigh such factors and calculate decisions to act or refrain from doing so. He includes statements made by the adversary and cultural features to help alleviate "mirror-imaging" assessment of the adversary by ascribing to him the defender's values or, on the other hand, concluding he is so different he cannot be understood at all and deterrence efforts hopeless.

³⁰⁹ Pages 84-8 and 96-7.

domestic factors, and relationships with other actors externally (Huth & Russett, *General Deterrence between Enduring Rivals: Testing Three Competing Models*, 1993).³¹⁰

Emphasis in this chapter is on those areas in which national security-related beliefs and perceptions of North Korea's leader emerge in its state-level behavior. Substantive sections of the chapter will be organized as follows: a review of the identity and cultural factors of North Korea's people, providing historical insights to their national values and how those value might inform the strategic, the security-related political culture of North Korea's top leaders; the cognitive and psychological factors that informed Kim Jong-Il (KJI) as the primary decision-maker in North Korea in the period explored in the dissertation; and, key internal and external environmental factors of the North Korean state and how KJI may have interpreted those factors in his decision-making. The leader, ultimately, then, is the focus of understanding for deterrence purposes since he is the top decision-maker for national security-related decisions; he is the one who's personal psychological factors might play upon his decisions; he is the one who reflects the national identity and culture of the people; and, he is the one who will ultimately interpret changes in environmental factors, such as changes in Japan's BMD program over time.³¹¹ As Jeffrey Record argued, in his examination of Japan's WWII decision to wage war, "there is no substitute for knowledge of a potential adversary's

³¹⁰ Pages 61 and 64. These analytic levels, combined with other considerations by Huth and Russett and others, form a broad conceptual framework used in the dissertation, including: the adversary nation's identity; factors that exist in the adversary's internal and external environment; and, the individual leader's personal factors. Identity envisions such things as historical and cultural values. Internal environmental factors can include such things as the state's political apparatus, economy, military forces, and social issues including unrest or violence. External environmental factors can include trade or political and diplomatic interaction with other states or organizations. Personal factors of the leader can include his risk-propensities, emotive psychological factors, and cognitive processes at work.

³¹¹ For more on the role of the leader as a reflection of national values, an interpreter of the environment, and focus of psychological factors in deterrence-oriented profile research, see the author's article, "Can Tailored Deterrence and Smart Power Succeed against the Long-Term Nuclear Proliferation Challenge?" (Lowther, 2012).

history and culture” (Record, 2009).³¹² This sentiment is shared by Paige and modern scholars so the dissertation also takes this approach and seeks to understand, albeit in an abbreviated level of depth, the North Korean actor as Japan’s deterrence-based adversary (Suh & Lee, 1976).³¹³ These characteristics are useful in the development of a North Korea strategic profile and support broader theoretic arguments that deterrence is more likely to be effective with improved understanding of one’s adversary. The outline that follows in this chapter incorporates the background information provided above.

Identity & Cultural Factors

The North Korean national identity and psyche are heavily influenced by Korea’s history, including ancient history and more modern occupation by Japan.³¹⁴ Along with other cultural factors, this informs North Korean leadership decision-making, and is summarized below. Motivations from the past led to what could be described as a distinctive North Korean national identity and the rise and national embrace of Kim Il-sung (KIS) and the Kim family dynasty. This section of the Profile includes: lessons from history, describing the long Korean history and the conflictual and cooperative interaction with Japan; the social contract, which connects the past to the modern Kim dynastic rule and gives Kim a powerful position regarding national security and relations with outsiders including Japan; and, national cultural values, such as nationalism and admiration of the military, which strengthen North Korea and help explain its internal and

³¹² Page 52.

³¹³ In his chapter entitled, “Toward a Political Leadership Profile for a Changing Society.” Pages 240-1. There are several ideas from scholars on the approach one could take to a strategic profile and the contents therein. For example, Glenn Paige identifies 11 different types of political leadership profiles that reflect the difficulty in supporting or crafting a single, authoritative deterrence-oriented strategic profile. These 11 include: conceptualizing studies; operational code studies; political biography studies; role studies; leadership institution studies; elite studies; follower studies; community power studies; value studies; problem-solving studies; and, area studies (Suh & Lee, 1976).

³¹⁴ North Koreans claim a history of Korean people dating back 5,000 years, though this is typically connected with legend or myth. See, for example, David Rees (Rees, 2001); page 1.

external behavior. These identity and cultural factors are the foundational components through which the other two major sections of the Profile orient themselves: KJI's personal factors, in large part a reflection of the national psyche described in the identity and cultural factors section; and, the internal and external environmental factors, describing KJI's interaction, as leader of North Korea, with external actors.

Lessons from History

Korean history is a long one, marked by depth in culture, a relatively high level of sophistication, and deep traditions including dynastic rule. Geographically situated as a peninsula, however, meant Korea's interaction with the world was less inclined toward global relations, like China's, for example, and more toward regional contacts, particularly with China and Japan.³¹⁵ And for two millennia Korea was content with this situation, earning it the label "hermit kingdom," though this characterization is inaccurate in many ways. However, the Korean people, and their provincial—and later, central—leaders were exceedingly proud of their culture and independence, and when outside invasions occurred over the centuries, Korea found this exceptionally offensive, criminal, wrong, and disrespectful to its position as an advanced culture. These memories are deep on both sides of the current political divide, and combine in modern North Korea with other factors, such as personal characteristics of its leaders, Communist influence, and ideology to orient much of North Korean state behavior.

³¹⁵ New archaeological discoveries, lending to modern development of the landscape, are offering new insights into ancient Korean culture and the roles of China and Japan in their cultural development and history. North Korean perspectives, however, are aimed at interpreting archaeology to support their notions of centrality and primacy of their position in Korean culture, if not to propagate a myth it was the source of all human civilization (Byington, 2008); in Hyun Sook Kang's chapter, "New Perspectives of Koguryo Archaeological Data," page 24.

Earliest Korean historical records were established with the Three Kingdoms period (57 BC to 668 AD). Koguryo was a kingdom to the North that also stretched into large parts of Manchuria (it occupied what is now North Korea and more); Silla was to the southeast; while the Paekche kingdom was to the southwest. Of particular note from this period was the effort by Koguryo, a “warrior” kingdom that was the land-based gateway to the rest of the peninsula, to fight off the many attacks including China. A “Golden Age,” which lasted for 300 years, followed in which Koguryo itself was conquered by China and the Korean kingdom of Silla in the south. Chinese culture, including Buddhism, also moved south and eventually to Japan as a result. But the lengthy Koryo period that followed (935-1392), with a new capital in the peninsula’s center, was turbulent: the peninsula came under Mongol control by invasion; and, “Korea” (as it was first called in this period) helped the Mongols attack Japan (unsuccessfully) and fight Japanese pirates. In 1392, Korean General Yi T’aejo took control of Korea and moved the capital to the area of what is today the South Korean capital of Seoul (McCune, 1950).³¹⁶

The Yi dynasty (also called the Choson dynasty) lasted over 500 years, until the 1910 Japanese annexation of Korea in its imperial period. This period is remarkable for many reasons. First, the Koreans again were faced with invasions, both by Japan in 1592 and later by the Manchus.³¹⁷ This period was also known for Korea’s isolationist approach and the nickname of “hermit kingdom,” though trade and other contact with Japan remained active from the early 1600s. Internal strife also emerged, with revolts in 1882 and 1884, ultimately climaxing with Japan’s forceful control of the region that it

³¹⁶ Pages 10-13.

³¹⁷ Such was the devastation during the various invasions that little of the reportedly vast and brilliant art and pottery has survived (Vos, 1997); page 8.

had already begun to control economically (McCune, 1950).³¹⁸ Combined with other cultural, environmental, and personal leader factors, these forces are potent decision variables in scenarios like the recent period of Japan-North Korea relations and its broader regional context.³¹⁹ This view of the real possibility of externally-based existential threats was reinforced during Japan's imperial occupation and still dominates the North Korean psyche.

During the Japanese imperial period (which included Japan's murder of Korean Queen Min),³²⁰ Korea experienced social upheaval and economic plundering at the hand of the Japanese. Socially, Japanese colonial practices represented exceedingly foreign (European) ideals contrary to Korean cultural norms (Woodside, 2006).³²¹ Kang spoke of the rules imposed by Governor-General Minami Jiro, from 1936-42, in his quest to unify Korea with Japan, including: reciting the Pledge of Imperial Subjects; speaking only Japanese; worshiping at Shinto shrines; and, changing their Korean names to Japanese

³¹⁸ Pages 12-16. One internal revolt in the later Choson period was the Hong Kyongnae Rebellion in 1812, an action by elites and peasants in the northwestern Pyongan Province. Starting small, the rebellion sought to uproot systematically the dynasty. Put down within months, the rebellion showed some weakness to the dynasty's central government to address the issues of regional groups (Kim S. J., 2007); pages 3-10. Tae-jin Yi argues the "hermit kingdom" is an unfair one since Korea was actually trying to modernize and join international society, despite its military weakness, though this effort was not until the late 1800s (Yi, 2007); pages 340-50. The common picture of Japan forcibly opening up Korea to the world and modernization, Yi argues, is a misplaced one. Importantly, McCune summarizes these historical periods as ingraining three "forces" of modern Korean thought: nationalism; social and political conservatism; and ties to China. These forces have endured in North Korea especially, despite years of Japanese occupation, division, conflict, and Communist influence. Pages 12-16. Korea, however, had become very weak in its late dynastic period as other regional powers grew, leaving it but a "pawn" to the stronger (Grayson, 2002); page 150. Nationalism, it should be noted, is also a hallmark of South Korean culture (Breen, 1998); page 18.

³¹⁹ So deep an impression were these long-ago invasions by the Japanese and others that they "overturned fundamental assumptions concerning national security" in the minds of Koreans (Haboush & Deuchler, 1999); page 51.

³²⁰ The Japanese murder of Queen Min was not simply an effort to quell dynastic rule in Korea: it was an effort to quell dissent if not rebellion since the queen was in "the vanguard of the opposition" to Japanese reforms (Rees, 2001); page 97.

³²¹ Pages 40 and 88.

names (Kang, 2001).³²² Humiliation for Koreans began immediately: it forced all Korean men to receive haircuts, removing their top-knot, the very symbol of manhood.

According to McKenzie, this single legal act did more to “alienate the affection of every Korean” (McKenzie, 1908).³²³ Kim Il Sung, in a speech given to inspire support for guerilla warfare against the Japanese in 1931, claimed, among other things, that Japan was arresting, imprisoning, and murdering innocent people everywhere in Korea and through its laws deprived Koreans of freedoms of speech, press, and assembly (Kim I. S., 1977).³²⁴ Economically, Japan loosely divided Korea into economic production regions, with the south being developed for its agricultural strengths and the north being developed in heavy industry, capturing the vast minerals and other resources in that region (Clark, 2000).³²⁵ This industrial development in the north by Japan is what significantly helped North Korea rise to such industrial heights in the first twenty five years of the postwar period (Kang M.-G. , 2005).³²⁶

³²² Page 111. Changing names was considered “the ultimate indignity.”

³²³ Pages 46-8.

³²⁴ Speech delivered at the Meeting of Party and Young Communist League Cadres at Mingyuehkuo, Yenchi County, December 16, 1931. Pages 15-8. Kim Il Sung is often also rendered Kim Il-Sung. In addition to Japanese occupation and the Korean War, James Grayson argued the presence and growth of Protestant Christianity to be another significant influence on Korean history since the end of the Choson Dynasty. This religious factor not only brought ideas of modernization from the west but also ideas of working to care for needy people. Missionaries from the U.S., Canada and Australia organized the entire peninsula into sectors for growth, expanding the churches to becoming “thriving institutions.” Later, Japan suppressed these organizations, which came to symbolize, if not side with, anti-Japanese nationalist movements. Likewise, in the aftermath of the postwar period when Korea was initially divided, Christian entities were far stronger in the north but were designated anti-Communist by the Soviet side consolidating power with Kim Il-Sung in the north. Many fled south, others who remained were executed or went into hiding (Grayson, 2002); pages 155-63. Some religious elements in the north survived, however, at least into the 1980s and 1990s. Religion, especially that stemming from outside powers, was suspicious and its influence, and that of other religion, was to be replaced with Juche ideology.

³²⁵ Page 7. He cites, for example, Arab references to gold in the Silla kingdom east of China and, later, European and American miners working gold veins in Korea’s north in the 1890s.

³²⁶ Pages 140-1. Mineral exploitation by Japan during its colonial period in Korea was staggering, with Japan acquiring outright ownership of 80% of all mines and production. WWII wartime production increased, particularly in gold mining, where the bulk of the gold mined in Korea was sent to Japan to fund its war efforts. In addition to gold, Korean mines provided Japan with high production in silver, iron,

The North Korean identity continued to be formed after the close of WWII including its influence by Communism and the Korean War.³²⁷ In the postwar period prior to the Korean War, the Communist revolts in the South were supported by North Korea and Kim Il-Sung (Kim, 1977).³²⁸ In the period leading up to the Korean War, North Korea maintained it was “the only lawfully elected people’s government” in Korea. It clarified Pyongyang (the current capital of North Korea) to be its “revolutionary” capital only; Seoul remained the true capital of all Korea (Kim, 1977).³²⁹ Kim Il-Sung, the father of KJI and the modern North Korean state, served as an anti-Japanese guerilla and, upon conclusion of WWII, KIS collaborated with Soviet forces to become the Korean leader in the North. His role as a popular nationalist (disputed by some in the West) not only helped propel him to lead the country, but to shape the country and its ideological companion to nationalism and recreate a type to totalitarian dynasty for his son, KJI, to inherit. The personal role of KIS and North Korean

tungsten, and graphite, considered “particularly essential to national defense” needs in Japan. Trade in Japan’s imperial era rose quickly, with Korea being active through its brokers for agricultural products at first (predominantly rice) but later in industrial production to support the war efforts (McNamara, 1996); pages 27-35.

³²⁷ Influence of Communism did not, however, mean North Korea could be identified simply as a Communist state. Hyun Ok Park argues that many wrongly interpret North Korea’s anti-colonial struggle as part of the broader Communist movement in earlier years of the twentieth century. Communist ideology, Park emphasized, was trumped by ethnic nationalism from the very beginning, with China purging ethnic Koreans from its party ranks (Park, 2005); pages 22-3. On the idea of North Korea being more nationalist than Communist, see Robert Oppenheim (2008), page 47 including note 11. In fact, both North Korea and China would prove more nationalist than Communist as time went on.

³²⁸ Pages 78-80. This not only failed to spark the desired surge of Communist sympathy and rebellion, the South outlawed Communism and strengthened anti-Communist ideology and U.S. involvement. These revolts, occurring in Cheju Island, Taegu, and Sunchon, among others, were very violent with many innocent people getting killed. During the five-year UN trustee period of Korea, Communist connections strengthened in the North. While it is difficult to assess, Lee suggests that, had the UN trusteeship of Korea succeeded in creating a unified Korea, such a state would have eventually landed within the Soviet orbit of influence, not the West’s, due to common borders with Communist states (China and the Soviet Union) and the likelihood of their influence with sympathizers in Korea (Lee, 2006); pages 156-7.

³²⁹ Page 77.

nationalism during and after the Korean War were important factors in shaping the identity of the people and their state.³³⁰

³³⁰ North Korean nationalism, however, is generally overshadowed in many historical accounts at that time by the Cold War rivalry between the U.S. and Soviet Union. Valois writes, for example, how Truman, after the North Korean invasion into the South in 1950, warned that Soviet expansion, if unchecked, would continue through Asia, the Near East, and could continue through Europe. Soviet Communism in Korea was akin to the beginnings of Hitler's campaign—an intolerable situation to Truman (Valois, 1997); page 8. According to U.S. war reporter John Dille (and many others at the time), the U.S. intended the Korean War to provide it (along with Japan) a second anti-Communist base in Asia; for the Soviets, it was simply a test of U.S. resolve and an effort to wear it down (Nishi, 2003). In John Dille's article, "Saving Ourselves for the Big Battle against Communism." Pages 106-14. According to the footnote, the original source was John Dille, *Substitute for Victory*, 1954. Part of the reason many ascribe the Korean War's trigger to the greater Communist struggle, was the role of Stalin and the Soviet Union with, if perhaps over, Kim Il-Sung and North Korea in the early postwar period. Graeme Mount argues Stalin's interest at the time was access to obtain ice-free ports on the Pacific coast, an option it simply did not have within its territory. A deal with Chiang Kai Shek granted Soviet access to the port of Lushun, but with Mao's success in China's civil war, that prospect was gone. The ports in Inchon and Pusan interested Stalin as alternatives should conflict on the peninsula emerge. He supported KIS and was willing to provide him military arms (Mount, 2004); page 24. Ironically, use of the 38th parallel to divide Korea, as was done in the Korean War, was not a new idea to peninsula occupiers in the postwar period. It was Japan which suggested that dividing line with Russia in 1896 in its negotiations over carving up interests there and in Manchuria. Disputes between the two led to the Russo-Japanese War in 1904-5, with Japan prevailing (Kim D. K., 2005); page 119. Unlike North Korea, which incurred devastation and over a million military and civilian casualties, Japan, as a base for U.S. operations in the Korean War, received nearly \$3 billion from the U.S. to aid in facilitating the U.S. military activities from there, allowing Japan's economy to significantly rebound in the postwar period (Kim S. S., 2006); page 172. While the idea of nationalism can be found in both North and South Korea, key differences to the people of the south lie in political choices across the divide. Decades of purposeful cultural inculcation in the North, however, may have developed very different views by the people of the north though this cannot be confirmed either way. For example, although he acknowledged a great historical "interdependence" between Korea, China, and Japan, Syngman Rhee (South Korea's first president) was clearly a voice for independence for Korea in his day—a necessity for its survival (Rhee, 2001); pages 253-80. According to Rhee, the three peoples were part of a single Mongolian race; pages 80-1. His six principles for Korean independence included: being open to the outside world; adopting new methods for security; mastering diplomacy; respecting sovereign rights; honoring moral obligations; and, respecting the right of freedom. In addition to common ideas of nationalism, recent studies suggest the people of the south recognize a strong connection with North Koreans with respect to their common blood line and ancestry (Shin, *Ethnic Nationalism in Korea: Genealogy, Politics, and Legacy*, 2006); pages 195-8, including tables 10.3 – 10.7. Defector accounts are mixed in that they reflect a desire, at least by some, to reunite with family, on the one hand, and a completely different view of their individual and national identity on the other. Perhaps a simple view of Korean national identity is that it reflects a proud independence built upon early historical consolidation and rule of Korean groups on the peninsula, but one which was tempered by past recurrences of invasion and resulting suffering following. Keith Pratt, for example, says "Modern Koreans are inclined to speak of their special shaping as a people by the psychological and physical suffering their nation has endured" (Pratt, 2006); page 304. On a personal level, Sunny Che, speaks of growing up and life as a "Cho-sen jin" (Korean immigrant living in Japan): ostracized, never feeling welcome, and always feeling he was an outsider (Che, 2000). Che's mother was a relative of the Queen of the Korean Yi Dynasty. See pages 3-5.

Given this historical backdrop to the modern North Korean state, one would expect a general pattern of relations with its neighbors to be marked by opposition, confrontation, power-politics, self-help, and violent provocation from North Korea's leaders. This is the consistent trend. While it is the military forces of ROK and the U.S. that directly threaten North Korean sovereignty and regime survival, given the history of Korean interaction with Japan one would expect the North Korean relationship with Japan to also be confrontational or violent. However, at least since the end of the Cold War a less violent framework has existed in its relations with Japan, at least when compared to the North's interactions with the U.S. or ROK. One may also expect direct confrontation over Japan's pursuit of a BMD program since it undermined North Korea's means of coercion. However, this has generally not been the case.

Social Contract

The historical and cultural component of Korea's past, coupled with a shared popular nationalism after WWII, permitted KIS to embark upon a totalitarian regime, fostered by Communist ideas of the era, without a great deal of resistance. This became solidified after the Korean War. Leadership, even national "fatherhood," was provided for the North Korean people. The Japanese occupation may have strengthened North Korean nationalism, but the people of the North came to possess a "fixation" on KIS exceeding even the passions of nationalism (Shin & Robinson, 1999).³³¹ The people received certain entitlements from the state in exchange for support of, and submission

³³¹ In Carter J. Eckert's chapter, "Exorcising Hegel's Ghosts: Toward a Postnationalist Historiography of Korea." Page 370. Robert stresses the importance of the adversary leader's role or position over the people, regime, or state. The strategic role taken by the leader in his environment regionally and historically can, in large measure, inform and explain his decisions, perhaps more than personality (Roberts, 1988); pages 160-4.

to, its leaders, including education, employment, and health care (Robinson, 2007).³³²

Such cultural perceptions can be powerful motivations for political behavior toward Japan. Chang and Lee argue the people of the North are part of a collective, unlike the people in the democratic South who are characterized by their individuality (Chang & Lee, 2006).³³³ It is this collective to which the people belong and which KJI controlled and provided.

North Korea's predominant ideology is *juche*, a framework of self-reliance begun under KIS. *Juche*, at its core, reflects the struggles and occupations of the past, marking the ideology as essentially nationalism walled by a deep distrust of others (Belke, 1999).³³⁴ But *juche* must be conceptualized as more than a notion of independent-minded nationalism or resistance to outside help. Rather, it is a stubborn duty to do things in the North Korean way, regardless of whether that way is efficient, effective, or the best alternative available. *Juche* is an imperative that motivated KJI toward decision-making that helped make KJI appear reckless, risky, uninformed, or heartless. *Juche*, then, was part of the social contract in which the state, through the regime and its leader, provided essential needs of the people, particularly national security needs, and they in turn would cede decision-making rights to national leaders. This approach not only led North Korea

³³² Page 150. However, Robins and Post speak of the paranoia of North Korea internally in which its people, either willingly or under compulsion from fear, subordinate themselves slavishly to their leader (Robins & Post, 1997); page 87.

³³³ Page 222. However, control of the people began immediately upon the end of the Japanese colonial rule. Since North Korea emerged, the state, with Soviet help, established a "regime of surveillance" that included spying on its population, social controls, and mental and physical self-criticism. Ever fearful of external dangers, such as from South Korea, North Korea's national security was dependent upon control and, with this view in mind, pushed its surveillance regime down to the village level, but linked all information links to its central government (Armstrong, 2003); pages 191-214. Self-criticism involved disciplining the mind and body so as to be in unison with the state—a process westerners called brainwashing. According to Armstrong, a highly-efficient program of near-total control took decades.

³³⁴ Page 197. *Juche*, like Confucian thought, describes the value of humans only in terms of their existence within society, though *juche* emphasizes the communal aspects of society (Baker, 2008); page 147.

to embark on a path of military strength and violence to secure regime and national survival, but one of authoritarian rule. The consequences of employing *juche* within the social contract, however, were mixed. For example, military discipline has seen fissures including the possible naval provocation in June 2002 off the west coast that was not directed by KJI but conducted by disgruntled military officers (Schneider & Post, 2002).³³⁵

Cultural Values

In addition to a powerful sense of independence and recognition of North Korea's leader as benefactor, certain qualities, also related to its past, might also be described as North Korean cultural values of which North Korea's leader KJI shared. These values appear to have strengthened North Korea in ways that temper the need for economic relief, for example, that outsiders have ascribed to periods of North Korean plight. In such cases, the North Korean strategy of coercion, including interaction with Japan, should, therefore, not be presumed to reflect a willingness to acquire external funding or aid at all political or military cost. North Korean cultural values include admiration of the military, filial community, nationalism, honor, and pride in culture including resiliency

³³⁵ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Pages 109 and 116-8. Others included: high levels of military investment despite extreme economic challenges; a social culture of dependency and population passivity; an attempt at total state control where no real opportunities for political or religious opposition or independence are possible; soaring corruption in which illegal economic activities occur even with the aid of government officials. Intended as a national policy path, *juche* grew out of a xenophobic view based on past historical invasions of North Korea, but especially Japan's more recent colonial occupation period in which KIS earned veneration as a guerilla fighter against Japan. According to a western diplomat who served in North Korea, *juche* simply meant relying upon one's own resources, and doing so in a non-capitalist but non-dogmatic way. The North Korean's viewed it of particular value to developing countries of the world where emerging states could skip the capitalism step in traditional Marxism-Leninism and go straight to socialism. It led to pride, in his view, but also overconfidence resulting in lack of value in international cooperation, and elites living in luxury while the vast numbers of people experienced starvation and destitution (Cornell, 2002); pages 42-5. Cornell was the Swedish Charge d'Affaires to North Korea from 1975-77. The Embassy of Sweden in Pyongyang was for many years the only western embassy there.

and technological achievement.³³⁶ Dependence upon the military for protection may also stem from experiences during the Korean War not unlike some peoples and cities during WWII. Springer makes the case, for example, that the North Korean people endured great suffering during prolonged aerial bombings of the cities of Pyongyang, Hungnam, Wonsan, and Kanggye—an experience that shook their psyche (Springer, 2010).³³⁷ In providing defense and “liberation,” the military and its personnel are highly regarded in North Korea by its people.

Long-held beliefs, stemming in part from Confucian connections, help form the core of Korean, and North Korean, cultural identity, chiefly the idea of filial deference and loyalty (Chang & Lee, 2006).³³⁸ In a collective state such as North Korea, this helps binds people with leader and is another feature of ancient Korean history intertwined with modern experience.

Anti-Japanese sentiment continues in North Korea at the center of its nationalism and spans from the central government down to ordinary citizens. Bruce Cumings, for example, describes life in North Korea as if the country is “still fighting the Japanese,” with government-run press near-daily flogging Japan for wartime atrocities (Cumings, 2005).³³⁹ Nationalism in the North is not only important, it is viewed as superior (Chang & Lee, 2006).³⁴⁰

³³⁶ There are diverse views on the division between north and south. For now, many voices ascribe to North Korea a different culture, or at least differing emphases upon cultural aspects. Others, such as Roy Grinker, argue the differences have become deeper, and the two now more heterogeneous than not (Grinker, 1998); pages 225-7. He states, “North Koreans will never be replicas of south Koreans,” citing the difficulties defectors face in integration after making their ways to South Korea.

³³⁷ Page 11.

³³⁸ Page 224.

³³⁹ Pages 406-7. Cumings also says North Korean youth take camping trips to retrace the steps of anti-Japanese guerillas during their struggle.

³⁴⁰ Pages 254 and 278-9. Neither the North nor the South dispels the idea of being nationalist. However, many in the North argue the nationalism of the North is “purer” than that of the South, the latter having

Technological development is an important historical phenomenon globally, and has merit in Korea's history as well, its people also reflecting ingenuity and accomplishment. Korean pride today flows, in part, from the period of the Yi dynasty when, for example, in the late 16th Century they invented and employed iron-clad ships to defeat the Japanese naval ships during its invasion. Korea also penned its first written language and invented "movable metal type" for its language perhaps decades before such an apparatus was invented in the west (McCune, 1950).³⁴¹

Pride in its self-sufficiency, often reflected in its resiliency, is a psychological factor that exists at both the societal and individual leader (KJI) levels. Resiliency was tested particularly in the 1990s where the state had lost a great deal of support from the Soviet Union and Eastern Bloc countries following the Soviet collapse. It was in this period when consecutive years of flooding and drought left 18% of North Korean farmland utterly destroyed (agriculture accounts for 30% of its entire economy); and, perhaps 10% of its population (two million people) died of starvation or related illness (Kim S. H., 2003).³⁴² Hwang argues the idea of a strong central government in North

retained a measure of occupation and willing adoption to Western tendencies. On the other hand, the South portrays itself as better nationalist victors, having beaten both the Japanese and Communists. As others have described, Korean nationalism was, and is, a very strong factor in its thinking on security. In addition to the other accounts cited in this chapter, Schmid described the great many violations that occurred along the border with China in the late 1880s leading to a feeling of "siege" and heightened Korean sensitivity regarding its territory, contributing to the emergence of an enduring Korean nationalism (Schmid, 2002); pages 199 and 202.

³⁴¹ Pages 12-16. When compared with other peoples, however, Seong-Rae Park suggests Korean contributions were historically modest (Park S.-R., 2005); pages 1-5.

³⁴² Pages 135-6. It was during this challenging time South Korea's leadership adopted the "sunshine policy" which sought to pursue humanitarian issues with the North separate from political ones. The rise and influx of dozens of nongovernmental organizations (NGOs) resulted from this policy. Pages 136-7. These NGOs worked in four functional areas: public service, unification, religion, and vocational support. It should also be noted that the desire for humanitarian support from the south toward the north may stem from both the desire to aid fellow ethnic Koreans, but also as a reflection of the strong Christian influence in the south that spread in the postwar period with anti-Communism. From a different perspective, Pollack suggests fear of outside economic influence is a consequence of its ideology and culture. North Korea denounces such influence as "ideological and cultural infiltration," an age-old strategy used by an

Korea can be ascribed to the influence of Confucian thought while the “sacrifice” stems from Buddhist influence upon North Korean society (Hwang, *A History of Korea: An Episodic Narrative*, 2010).³⁴³ Together, these may help explain the resiliency of the people in the most trying times, such as famines of the 1990s, but happened in such a way that the sovereignty of the KJI regime was never stressed through uprising in response to government failures.³⁴⁴

KJI Personal Factors

Kim Jong-Il, only the second person in the North’s dynastic continuity, was a reflection of national identity and culture and the nation’s clear dominant leader in its relations with external actors including Japan. KJI’s personal factors were, therefore, knit into the fabric of the nation-state, the ruling regime, and interaction with the outside world. While KJI lived in the shadow of his father KIS, it must be remembered that in the development of North Korea’s strategic culture of national independence, political sovereignty, and regime survival, its leader, KJI, *was* the regime and the regime *was* the nation. Independence and sovereignty depended upon the regime to succeed and survive, but the regime depended upon KJI personally. This is part of the North’s unique cultural and dynastic legacy, but also a reflection of the practicalities of modern totalitarian rule. As explained previously, the period of dissertation focus is 1990-2011. This period is principally one dominated by the leadership of KJI (he began to take over prominent

aggressor before violent attack (Pollack, 2004); in Nicholas Eberstadt’s chapter, “Why Hasn’t the DPRK Collapsed?” Page 157. This fear may explain the resilience, if not stubbornness, of North Korea to be unwilling to include outside participation in solving its economic woes, instead of merely exploiting their resources through coercion.

³⁴³ Pages 33-40.

³⁴⁴ North Korean resilience is difficult with which to argue and claims of impending collapse are a regular occurrence. One interesting claim was by a group of experts at the U.S. Central Intelligence Agency (CIA) who claimed in 1997 the North would collapse within five years (Ford, 2008); page 152.

positions from his father at the beginning of this period and died at its end). Thus, he is the focus of this section of the strategic profile.³⁴⁵ This major section of the Profile includes: KJI's ascendancy to power, including his long-term service in, if not control of, the activities of government rather than being a casual bystander; KJI's personality and approach to decision-making regarding national security issues; and, KJI's psychological factors—his rationality and predictability, motivations and goals, cognitive processes, risk tolerance, health, and emotive factors—affecting national security decision-making including decisions involving ballistic missiles and relations with Japan. Thus, KJI's personal factors reflect, in part, the national identity and culture of North Korea, and can be seen in his interaction with internal domestic audiences and relations with external actors including Japan.

Ascendancy to Power

KJI was not a disinterested member of royalty, ascending to a throne at an appointed time to serve as a figure head. Rather, his ascendancy was purposeful and perhaps strenuous, ultimately leading to not only to the ultimate position of national power but command of government and national security policy, including relations with Japan. The process of KJI's succession and takeover of power was gradual through rising positions in government. For example, in 1974 KJI gained operational control of the Workers' Party; by 1980 his measures were seen in the party Congress; and, he was later named head of the party's secretariat, essentially making him the second most powerful

³⁴⁵ KJI died 19 December, 2011, and upon his death his son, Kim Jong-Un (KJU) assumed power of North Korea including Supreme Commander of the military December 30th. In April 2012 KJU took over the KWP as its First Secretary and control of the NDC by becoming its First Chairman (Defense of Japan 2012, 2012); pages 20-1. KJU thus consolidated power, at least officially.

person and effectively running the government (Jung, 1998).³⁴⁶ KJI was named successor in 1980 (Grayson, 2002).³⁴⁷ KJI's public stature and path to succession emerged in 1980 when he was elected to senior Party positions at the October Party Congress. In 1982 he received the title "Hero of the Democratic People's Republic of Korea" and published *On the Juche Idea*, the latter making him the "definitive interpreter of his father's ideology." Further, state press began to speak more of KJI and by 1983, according to Adrian Buzo, he'd been "endowed with the same personal and political genius-leader attributes of his father." Outside speculation was KJI would represent a new, younger generation with new ideas. However, as KJI produced more ideological papers it became clear he was aiming for all generations of North Koreans to continue on the guerilla revolution of his father—no significant change was coming in the person of KJI (Buzo, 1999).³⁴⁸

While KJI did not officially take over leadership of North Korea until 1994 when his father died, he had been groomed for succession for many years and his control effectively began closer to 1990. Handover of power was incremental and, according to Oh and Hassig, KJI exercised near-total control of the state before his father died (Oh & Hassig, 2000).³⁴⁹ For example, according to Baird, KJI became the first deputy chairman

³⁴⁶ Page 340. When KJI was head secretary of the Party's Organization Department (essentially running the government) he managed the various bureaus with meticulous control and efficiency. For example, he required every bureau department to submit reports weekly and he personally read and responded to every report. He kept his father informed, later using a tape recorder for him so it would be easier to grasp what was happening as KJI orchestrated it all. Further, all instructions, no matter how small, coming from KIS went through KJI before going to any bureau. KIS was a charismatic leader; KJI was in his comfort zone as a detail-oriented manager (Becker, 2005); pages 124-6 and 129. This process of KJI control and keeping information from his father may also have led to fighting between father and son over internal conditions, though this is unconfirmed.

³⁴⁷ Page 151.

³⁴⁸ Pages 105-6. In keeping with Korean tradition of myth surrounding its great leaders, so, too, is the story of KJI's birth: born on sacred Mount Paekdu, triggering a new star in the sky, rainbows, and lights in the sky. Most North Koreans likely understand the story to be the allegory of Kim's special purpose it was intended to portray (French, 2007); pages 57-8.

³⁴⁹ Page 91.

of the powerful National Defense Commission in early 1990 (full chairman in April 1993), the Korean People's Army (KPA) Supreme Commander in December 1991, and awarded the military rank of marshal in April 1992. He did not assume leadership of the Korean Workers' Party (KWP) until three years after KIS died and never assumed KIS's political title of president (Schneider & Post, 2002).³⁵⁰ Thus, after 20 years of such management processes, KJI was able to maintain his tight government control upon his father's death.

KJI took over North Korea in every respect when his father died in 1994.³⁵¹ KJI's succession of his father and founder of the state was not automatic, nor was KJI's grasp of power. KJI was well-prepared, adapted as necessary, and took measures to buy loyalty where necessary. These, and other reasons, explain KJI's success in garnering and retaining power (Lynn, 2007).³⁵² While North Korea does not today control its people quite to the extent it once did, KJI sought to control what he could of what his people did and thought (Scobell, Kim Jong Il and North Korea: The Leader and the System,

³⁵⁰ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Page 111-2. Further, KJI was the one who met with Soviet officials in 1990 when they informed the North it would be losing considerable Soviet aid (Cha, 2012).

³⁵¹ Two significant political activities were already underway that summer: negotiations with the U.S. over North Korea's nuclear program and an upcoming, and first-ever, North-South summit (Jung, 1998); page 342. He navigated both, though neither led to North Korean abandonment of its nuclear program nor political reconciliation with South Korea. To ascribe "generalship" upon himself is not that far removed from ancient Korean history when, for example, Koryo royal kings partnered with "royal" military leaders in the same capital city (Shultz E. J., 2000); page 175. This was unlike Japanese shoguns who were more autonomous and geographically separate. Eugene Park expands on this and argued Korean military influence expanded through the rise of a distinctively military aristocracy that allowed a better military cadre through use of an examination system, as well as improved access across the social strata by elites and non-elites alike (Park E. Y., 2007); pages 179-80.

³⁵² Pages 110-6. According to Lynn, the reasons include: (1) 25 years of preparation, governmental service, and personal power consolidation; (2) replacement of old generation loyalists; (3) adaptation of *juche* ideology to undergird a new "military first policy," solidifying loyalty of the military behind him; (4) tightening his grip of control through information management; (5) buying loyalty from elites and party members through material perks; (6) fostering a siege mentality among the people; and, (7) conducting limited economic reforms in 2002 to help manage a growing black market. According to Lynn, public executions continue as a tool of psychological control of the people.

2006).³⁵³ Interestingly, B.R. Myers argues North Korean provocations of recent years are intended to demonstrate legitimacy to the domestic audiences of North Korea—legitimacy being a growing problem and a potential source of future crisis in North Korea (Myers, 2010).³⁵⁴

Personality

Worldview, Style, & Image.

KJI followed in his father's footsteps in many ways, though KJI departed from his father in some ways as well as circumstances warranted. His personality also affected how KJI interacted with Japan through ballistic missile-back coercion, on the one hand, and political normalization actions on the other, having implications for how he may have responded to Japan's BMD program. KJI was heavily influenced by his father, KIS, who founded North Korea and began the Kim dynasty, now stretching over 60 years and three generations. Jerrold Post argued KJI's father cast a long shadow, placing increased pressure upon KJI to perform and leading to narcissistic behavioral patterns (Post J. M., 2004).³⁵⁵ The cult of personality pursued by KJI followed that of his father. But it cannot be presumed that the people, or the elites, ever warmly accepted this strategy, or that KJI believed they did. Rather, KJI wrapped himself in it and the people complied (Lankov, 2005).³⁵⁶ Neither did KJI depart from the North Korean autonomous idealism espoused by KIS—a disastrous choice, in Jung's view (Jung, 1998).³⁵⁷

³⁵³ Pages 2-4.

³⁵⁴ Page 17. As such, they are not attempts to threaten and blackmail external actors, such as Japan, the U.S. or ROK.

³⁵⁵ Pages 239-41, 254, and 258. Post offered a passage about KIS to consider from an official website of the North Korean government. A few of the words from this passage, referring to KJI's father, include: great man; praised; legendary hero; liberated; defeated; led; patriot; repulsed; dignity; historic; gifted; invincible; immortal; peerless; and unprecedented.

³⁵⁶ Pages 5, 97-8, 130-1, 146, 150, and 171. According to Andrei Lankov, Kim Il-Sung was challenged openly by other senior leaders in 1956, for example, on his aggressive campaign of self-adulation and for

The Kim dynasty is viewed in North Korea as “fatherly” leaders, starting with KIS. According to Martin, this otherwise emotive and culturally filial connection is an historical one. For example, scores of North Korean children were left fatherless or orphans as direct consequence of the Korean War which left 25% of North Korea’s 10 million people dead. The state took charge of their welfare after the war and they were taught that its new leader, Kim Il-Sung, was their new father (Martin, 2004).³⁵⁸ Unlike the cult of personality forced upon the nation, KJI viewed himself—and presumed the masses willingly view him in the same way—as a continuation of this “fatherly” filial

mistreatment of the people, reflecting widespread dissatisfaction with the regime. It failed, all conspirators were executed or jailed, purges by KIS followed, and the central lesson learned by all was that “nobody should dare challenge the Great Leader and hope to get away with it.” Lankov, using newly available information from former Soviet primary sources, described the challenge as a legal one made during the party’s August Plenum meeting August 30, 1956. Lankov places the challenge in context of other Communist challenges, such as the 1956 uprising in Hungary, and a wider Communist “thaw” that allowed others to be more open about domestic problems. KIS endured none of this. See also pages 2-4, 77, 89, and 121. Of note, so close is the ideology of *juche* to KIS that it is also referred to as “Kimilsungism” (Kim D. K., 2005); page 165.

³⁵⁷ Page 343. The personality cult tactic first begun by KIS gave him the opportunity to solidify his rule, set aside the image of being a Communist puppet, and instill his personal “brand” of leadership style and ideology without opposition. The personality cult is the same style adopted and followed by KJI. Neither did KJI seek to reduce or dismiss the deification of his father through a complete “de-Kimification” campaign similar to what was seen in China regarding Mao or the Soviet Union with Stalin. The people, including defectors, according to Scobell, continue personal reverence for Kim Il-Sung. All of these things suggest to Scobell that North Korea is at best an “eroding totalitarian regime,” and has not yet begun transformation toward authoritarian rule. Under these circumstances, dissent emerges, while other things wane such as rigid ideology, party control, terror practices upon the people (though the means of coercion remain), information control, and central economic planning (Scobell, *Kim Jong Il and North Korea: The Leader and the System*, 2006); pages 3-4, including Figure 1. Scobell also suggested KJI’s successor would not likely be able to sustain a totalitarian regime. See page 39. KJI did in 2004 take measures to soften the personality cult aspect of his leadership style, removing some portraits of himself and dropping some references as “Dear Leader.” The reasons were unclear, though some speculated it was an effort to help garner foreign aid or to draw attention from the North Korean people (Mystery as Kim Title, *Posters Go*, 2004); originally an Associated Press source.

³⁵⁸ Pages 1-3. Kyung Moon Hwang argues KJI, like his father, merely reflects the revival of the ancient Korean kingship, a structure with which the people are comfortable given its familial orientation and succession and its sense of national stability (Hwang, *A History of Korea: An Episodic Narrative*, 2010). Page 256. This type of a structure, given its history, “made perfect sense.” Hwang argues it would be wrong to think the North Korean state and society was illegitimate or the political or cultural aberration; both simply followed a relatively logical path given their shared past but modern position across the dividing line (page 260).

theme. KJI also used Juche like his father, though KJI took it to a different level of engagement with the masses (Buswell, 2007).³⁵⁹

As absolute ruler, and surrounded by his own cult of personality, KJI had few restraints in feeding his ego. From a variety of first-hand and secondary accounts, Oh and Hassig suggest KJI was independent if not arrogant and disrespectful. They also believe his behavior was beyond decisive toward impulsive or reckless. At times KJI yelled or displayed a violent temper; allegedly, KJI ordered the killing of his former agriculture minister and personally executed the assistant to his brother-in-law, Chang Song-taek, as a warning to Chang for his arrogant behavior. This also appears in keeping with Kim's lack of trust for most people, retaining mostly family members, including his sister and her husband, as his closest associates or advisors. A hard worker, he expected the same of others in his name (Oh & Hassig, 2000).³⁶⁰ Kim lived in complete luxury as leader, with an abundance of every personal preference available to him (French, 2007).³⁶¹ His independence also took on a more pragmatic side since KJI appeared confident as leader, one who used crisis as a tool, and whose decisions were informed in most respects to official information.³⁶²

³⁵⁹ In Eun Hee Shin's chapter, "The Sociopolitical Organism: The Religious Dimensions of Juche Philosophy." Pages 517-22. Juche, according to Eun Hee Shin, has undergone transformation in its application in North Korea. Beginning as an anti-imperialist ideology, its founder, Kim Il-Sung, created and used juche as a nationalist instrument through the Worker's Party and government organs to help win sovereignty. It was interpreted later (in the 1970s and 80s) in a humanistic way to apply to social interactions. Lastly, under KJI, it was transformed into a state religion to be followed by faith with KJI as the religion's priest. Shin says "serving the people" was a mantra of KJI. Juche should be thought of as a philosophy of "sovereign autonomy" among other similar linguistic definitions.

³⁶⁰ Pages 91-5, including note 25.

³⁶¹ Page 62. These preferences included money, cars, clothes, palaces, alcohol, and women.

³⁶² Roberts identifies elements of decision-making style possibly germane to North Korean leaders. These include: their cognitive style (who and what informs their decision-making); confidence in decision-making; and, whether they are a conflict-seeker or avoider (Roberts, 1988); page 175.

At the center of KJI's personality was the need to be in control, not only to dispel any notions that he did not live up to his father's persona, but also as a practical method of managing the state domestically and internationally. KJI was also comfortable being in control; external arrangements that sought to constrain him were contrary to his personal style. For example, KJI was willing to breach an agreement to forego developing nuclear weapons when he felt it was no longer in North Korea's interests to do so. He also sought to circumvent sanctions on proliferation, including missile or nuclear related technologies that turned up later in places such as Syria. Further, he did not agree with the interpretation of UNSC resolutions banning North Korean ballistic missile launches, activities North Korea felt were space-related. It is difficult, therefore, to suggest North Korea to be anything but noncompliant in some key security related agreements. However, this should be understood to be a reflection of KJI's personality and need to be in control. KJI needed control of all events and was a micromanager in his style and approach as leader (Schneider & Post, 2002).³⁶³ This suggests he was personally involved in all decisions and state behavior regarding interaction with, and responses to, external actors, including Japan and its BMD.

KJI's personality was reflected in domestic affairs such as directing, or at least permitting, harsh treatment of North Koreans even when dire circumstances already existed (Martin, 2004).³⁶⁴ KJI's personal qualities were characteristic of most dictators:

³⁶³ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Page 112. He did not, however, like public appearances or giving speeches.

³⁶⁴ Page 679, including notes 62 and 63. Analytic differences exist on this point, though they appear to be questions of the order of magnitude of KJI's cruelty. For example, while KJI had been identified as a "malignant narcissist" without any capacity to empathize with his people by Dr. Jerrold Post, one of the foremost political psychologists in the U.S., Martin questions this analysis as an exaggeration. Martin himself, however, cites as evidence of KJI's empathy words in a 1996 speech and words he shared with visitors in 1998, both during horrendous domestic suffering; Martin also took issue with Post's claim KJI ordered systematic infanticide in political prison camps, though he acknowledged the infanticide as

he dominated others principally by fear; he did not care if others cared about him; he used bribes and privilege on the one hand, and humiliation or threat of execution on the other; he viewed people, decisions, and behavior from a utilitarian view; he welcomed new ways of getting foreign currency; and, he lived an indulgent lifestyle (Schneider & Post, 2002).³⁶⁵ Lynn claims KJI maintained systematic thought control over the people (Lynn, 2007).³⁶⁶

KJI's control in foreign relations was complex and included both a personal charm and command of details when necessary. On the one hand, in seeking to control foreign relations, KJI resorted to the use of brinkmanship and threats as his primary tools when relating with foreign leaders, hoping to advance his objectives through bluster (Schneider & Post, 2002).³⁶⁷ Brinkmanship was also conducted with violence, allegedly under KJI's direction (French, 2007).³⁶⁸ Hwang Jang-yop, KJI's former advisor said Kim was "strong willed, short-tempered and ruthless." To diplomats, on the other hand, he

factual—it was merely whether KJI had personally ordered the action. It seems plausible, given KJI's attention to details and desire for total control, that he had ordered the infanticide. Further, Martin admits KJI returned to military matters during the devastation in his country despite his public statements of empathy.

³⁶⁵ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Pages 113-4.

³⁶⁶ Page 95. Central control by KJI over economic affairs was a weak point in KJI's pursuit of control.

³⁶⁷ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Page 109. According to Jerrold Post, Stephen Walker, and David Winter, KJI's personality and need for control was important in North Korea's foreign policy (Post, *The Psychological Assessment of Political Leaders: With Profiles of Saddam Hussein and Bill Clinton*, 2003); in their chapter entitled, "Profiling Political Leaders: An Introduction." Page 2. The personality of a political leader matters more under certain conditions and under these conditions reflect most in foreign relations with their opponents. Some of these conditions include: when there are no clear precedents, routines, or established norms of acceptable behavior; when the leader occupies a strategic position; when the leader is charismatic; when the external environment is unclear; or, in crisis. While not an exhaustive list of conditions provided by the authors, many of those cited above appear to apply to KJI, North Korea's leader, implying his personality played a prominent role in North Korea's foreign policy including relations with Japan and reactions to its BMD.

³⁶⁸ For example, some claim KJI ordered a bombing in 1983 in Rangoon, Burma, that killed 17 South Korean officials, including cabinet members, presidential advisors and an ambassador. Pages 59 and 194. KJI did not favor large public appearances or interaction with common people but preferred small groups since he was lacking in charisma.

was charming personally, commonsensical, and smart. On one occasion, when Madeleine Albright met with Kim in Pyongyang in 2000, Kim personally answered most of the 14 missile-related technical questions the U.S. team presented, rather than delegating such details to others (French, 2007).³⁶⁹ This, and other events, showed KJI to be aware of the issues, including technical ones, pragmatic, rational, and calculating.

Control also led KJI to seek to manage perceptions of others, including foreign audiences. Some authors argue that the North Korean threats, even the very images of North Korea internally, are Confucian deceptive practices to merely give the illusion of a happy state domestically, but a dangerous one to the world. This approach built upon KJI's experience in the North Korean cinema industry and was affirmed by admittedly weak intelligence capabilities to discern the realities of the North Korean threat (Kracht, Munz, & Nikol, 2007).³⁷⁰ Events, such as provocations, may also have been measured events used by KJI simply to "keep people off balance about his next move," or as Kim supposedly described that strategy, creating an environmental "fog" to hinder his enemies. As such, Scobell viewed KJI as wanting to appear dangerous without actually possessing personality traits of self-destructiveness on the order of Hitler in his final throws (Scobell, 2006).³⁷¹

On big issues, however, it appears KJI's personality was also very pragmatic, defaulting to the influence of strategic culture—namely, personal, regime, and national survival needs. For example, in 2002, a crisis over North Korean revelations of expansion

³⁶⁹ Pages 62-3. As the unquestioned leader of a regional state holding a key strategic position, the foreign policy and behavior of the state reflected KJI's personality. For example, Hwang Jang Yop, the highest ranking defector from North Korea and the intellectual architect of the *juche* idea, argued KJI was the only person in North Korea with any real power; other faces known to the outside world, such as diplomats, were merely his instruments of policy but had no power (Oh & Hassig, 2000); page 91.

³⁷⁰ Pages 12-5.

³⁷¹ Pages 13-4.

to its nuclear program derailed rapprochement efforts with Japan (Schneider & Post, 2002).³⁷² On the other hand, Baird argued Kim Jong-Il was intrigued by change, much more so than his father, Kim Il-Sung (Schneider & Post, 2002).³⁷³ If so, then KJI may also have been susceptible to the changing influence of external environmental factors, including deterrence activities (and Japan's BMD), and behavior patterns would be expected, perhaps with the change in missile flight test directions, even originating launch facility.

Psychological Factors

In addition to KJI's personality, key psychological factors were also present that appear to have affected his national security decision-making in some cases, including his relations with Japan and he may have interpreted Japan's BMD in relation to the North's overall strategy of coercion versus long-term political goals in the region.

Rationality and Predictability.

In the post-Cold War era KJI generally showed consistent patterns of coercive actions, undergirded by a deterrent posture, with threats of ballistic missile use that could escalate as high as use of WMD. KJI was also rational and calculating in his decision-

³⁷² In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Pages 132 and 134-5. In September 2002 KJI and Japan's Prime Minister Koizumi signed an agreement setting the stage for establishment of diplomatic relations and political rapprochement. Japan was poised to send North Korea several billion dollars of aid. However, in October 2002 North Korea confessed it had been working on a clandestine uranium enrichment program, its second path to making nuclear weapons. Such a program was a breach of the 1994 Agreed Framework. Baird argued this type of calculating underscored the great fear North Korea maintained of outside intervention and the high value North Korea placed on possession and manipulation of WMD capabilities. The 2002 crisis offered KJI opportunities and he seemed willing to lose the political progress with Japan, and the very significant financial dividends flowing from it, in exchange for coercive security achieved through crisis itself and markers of deterrence success through his WMD. While the dissertation suggests KJI's decision-making reflected North Korean strategic culture, Baird suggests that, at least from the view of the U.S., KJI's decision-making reflected miscalculation.

³⁷³ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Page 109.

making, though he sought to manipulate the perceptions of foreign audiences to enhance his deterrent security position. For example, Rex Kiziah points to analysis by Richard Fisher of the Heritage Foundation that suggests the 31 August 1998 TD-1 launch was a coercive act to extort \$500 million annually from the U.S., a request made to U.S. congressional staffers earlier in August (Kiziah, 2000).³⁷⁴ In addition to the predictable pattern of political coercion described above, some suggest North Korea sought to maximize the probability of coercion's success by *appearing* dangerous if not unpredictable. For example, Derek Smith argued that North Korea manipulated U.S. and allied fears of North Korea's "rogue" state irrationality and impacted U.S. behavior (Smith, 2006).³⁷⁵

Motivations and Goals.

KJI was motivated by both external factors relating to North Korean security and internal factors pertaining to national pride and regarding his position as leader.

Generally, Glenn Snyder creates a distinction in a leader's types of motivations, useful in the dissertation when examining North Korea's leadership. He describes, for example,

³⁷⁴ Page 6. Kiziah described alternative perspectives concerning decisions and actions of KJI. On the one hand, behavior surrounding ballistic missiles and WMD were thought to reflect "irrationality" in his decision-making. On the other hand, Kiziah said some, such as Kim Tae-woo of the ROK Policy Research Office, considered KJI not only rational but in Kim's words, "dangerously calculative," influenced by regime survival and severe economic conditions.

³⁷⁵ Pages 68 and 71-4. In the late spring of 1994, North Korea used tense rhetoric against allies, creating an impression in the U.S. that North Korea was unpredictable. The outcome was, Smith argues, a quite rational outcome, from the North's strategy perspective, whereby the U.S. was deterred by North Korea and U.S. credibility diminished not only with North Korea but elsewhere including disarmament policy. Smith blamed the outcomes on poor U.S. understanding of North Korean leadership. This example occurred just weeks before the death of KIS; though he was still leader of the North Korean regime, KJI was certainly involved in the discussions and final decision-making on the North Korean course of action taken in this crisis. The U.S. took North Korean statements seriously including it would turn Seoul into a "sea of flames." Christoph Bluth argues KJI is not suicidal nor irrational, but suggests North Korean leaders want other countries to believe the North's leaders "as being capable of anything and afraid of nothing," a psychological strategy to deter foreign attack. An otherwise simple and successful strategy, Bluth cautions it carries risks of someone miscalculating (leading to war) or events simply spiraling out of the North's control (Bluth, 2008); page 141.

“in-order-to” and “because-of” motives (Dougherty & Pfaltzgraff, 2001).³⁷⁶ Perhaps a better way is to describe such motivations regarding North Korea’s security is temporally, where because-of motives relate to past experiences or event-sensitive values, interests, or emotions and in-order-to motives are intentions, goals, and objectives yet to be realized in the future. KJI, for example, behaved toward Japan in ways motivated by the emotive past occupation of Korea by Japan in its colonial period preceding World War II to punish Japan and extort from it as much political and material compensation as possible. He may also have behaved toward Japan in ways motivated by an intention to strengthen North Korea’s balance of power position and become the future, undisputed regional hegemonic power in Northeast Asia. On the other hand, KJI probably believed political normalization with Japan would have provided North Korea with leverage in Japanese decisions regarding U.S. forces based inside Japan as well as providing political and economic victories to boost KJI’s standing at home and in the region. For these reasons, among KJI’s priorities for preserving his regime and, therefore, national survival, was positive progress in relations with Japan. However, the issue of North Korean abductions of Japanese citizens damaged relations and stymied progress (Bechtol, 2007).³⁷⁷

³⁷⁶ Page 559.

³⁷⁷ Pages 139-40. Domestically, KJI also seemed genuinely motivated by his position as leader of the masses and not simply by the perks that position afforded, though he certainly took advantage of those perks. The social contract, for example, is a theme he spoke of early to which he came back to frequently over time. In a paper on socialism in 1991, he spoke of the uniqueness of North Korea’s course, claiming their socialism “derives its unconquerable might from the masses’ support for it and their confidence in it.” He went on to say the people “entrust their destiny” to it, the Party, and, of course, the leader—juche was actually the desire of the masses that (first) Kim Il-Sung captured for them and to which he, too, was guiding (Kim J. I., 2003); pages 1-2 and 45. This source document states it was a “talk” given by KJI, though it is hard to imagine he narrated the entire 46 pages of material; perhaps he presented a shorter version or simply made the paper available to Party members present at the 5 May 1991 meeting.

While KJI was pragmatic, he was also influenced by national and personal pride. For example, prior to North Korean multiple missile launches in July 2006, international pressure against North Korea was sufficiently marshaled to appear “unanimous,” an otherwise positive diplomatic feat against North Korea. However, the problem was that this left KJI without a “face-saving way to back down” (Pritchard, 2007).³⁷⁸ This, then, became a challenge to KJI’s personal honor and to North Korean national pride: KJI chose to launch the missiles and incur UNSC condemnation.

Cognitive Processes.³⁷⁹

While KJI traveled occasionally to Russia and China, and to Eastern European countries in the 1950s, his cognitive processes concerning interpreting external environmental factors through firsthand experiences and informational exposure to the outside world was limited or “bounded” (Scobell, 2006).³⁸⁰ Further, information coming to KJI was designed by Kim himself reflecting a preference of official information. He utilized the Three Revolution Team Movement concept in which party workers at the lowest and most distant districts obtained information of possible use in state operations

³⁷⁸ Pages 146-8.

³⁷⁹ Understanding of an adversary’s cognitive dimension is critical. In general, environmental factors exist that are reflected in adversary knowledge of events and changes across his state’s internal landscape as well as events within the region and across the globe. The cognitive factor is how that leader perceives or interprets those events or changes to the environment and how he includes those perceptions in his decision-making, including decisions one might seek to deter. For example, as a leader is considering taking action one would consider egregious, that leader’s cognitive mechanism might connect environmental factors to perceived consequences of his decision to act or, alternatively, decision to restrain from acting at that time. The cognitively constructed, but environmentally informed, consequences (i.e., perceived costs and benefits of acting, and perceived costs and benefits of restraint) are what others, especially in recent writings, refer to as elements of an adversary’s decision “calculus.” Michael Santacrose, in describing the role of the “cognitive dimension” in his guide for U.S. operational military planning against adversaries, suggests that in this dimension “people think, perceive, visualize, understand, and decide” (Santacrose, 2011); page 191. Decisions of these leaders may be influenced by their personal psychological characteristics, motivations, emotion, state of mind, perceptions, or rumors, among other factors.

³⁸⁰ Page 11. Scobell suggests his perceptions, or *misperceptions*, of other countries is probably limited to what he observes in movies, the internet, and satellite TV.

and passed it up through a reporting system directly to Kim's personal office. Reports prepared for Kim needed to arrive within three days, regardless of the Party, governmental, or security service source; urgent matters were to be phoned in immediately (Oh & Hassig, 2000).³⁸¹

Opinion differs on how well KJI was informed, however. Baird, for example, argues that KJI was well-informed, receiving not only official government reports but also getting information from foreign press, television, and the internet (Schneider & Post, 2002).³⁸² On the other hand, Oh and Hassig suggest KJI's subordinates lied to him regularly at least about domestic conditions, though propaganda appeared to suggest awareness of economic or social problems (Oh & Hassig, 2000).³⁸³ In foreign affairs, limited information may have meant KJI was vulnerable to misinterpreting the intentions of his opponents (Schneider & Post, 2002).³⁸⁴ KJI's need of being, if not appearing to be, in control, or in cases where information conflicted, may also have led him to shortcuts in his decision-making, resorting to those things with which he was comfortable and informed by those ideas with high and historic value.

Risk Tolerance.

KJI was likely willing to accept increased risk if necessary, but did not take risk blindly. For example, Baird stated KJI was a self-centered man who possessed a ruthless

³⁸¹ Page 98.

³⁸² In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Page 112. He was reportedly personally adept at monitoring all types of foreign media and using the Internet (French, 2007); page 62.

³⁸³ Pages 95-6. Individual and governmental self-interest was a particular concern in North Korea and something KJI spoke of in the confidence of private conversations (revealed later). However, as Oh and Hassig disparage, if KJI thought reform the remedy, that would have become apparent through new policy; to the contrary, Kim seemed to think greater and more frequent ideological indoctrination was the answer, apparently believing the ideology useful for the masses though he himself never lived a life of sacrifice.

³⁸⁴ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Page 109.

personality, willing to escalate in crisis or use WMD, but only if the situation warranted (Schneider & Post, 2002).³⁸⁵ Opinions vary on this topic. At one extreme, some, such as Richard Betts, saw KJI's actions as "reckless provocations" reflecting a high risk tolerance that could have led him to "to do wild and crazy things" with their nuclear weapons. Such an assessment was common in the post-Cold War era (Cha & Kang, 2003).³⁸⁶ Less extreme were the views of Cha and Kang who argued that, after years of unattained hopes, he became increasingly risk-acceptant (Cha & Kang, 2003).³⁸⁷ While this may explain KJI's willingness to accept higher risk as needed (as Baird suggested), prospects of political normalization and stability with Japan, coupled with Japan's significant strengthening of its deterrent capability through its BMD program, may have tempered KJI's risk-propensity, at least with Japan. More likely, KJI used the illusion of unpredictability and high risk tolerance to create fear in the U.S. of extreme North Korean actions. This was a logical strategy for KJI to achieve his objectives given his values, but was generally misunderstood in the West as irrational and "crazy."

Most probably, KJI's risk tolerance changed as North Korea's general strategy changed. Baird and others, suggest KJI calculated carefully in cases regarding national security, reflecting the significant environmental changes with which North Korea needed to adapt. The new strategy was oriented around political coercion to achieve its objectives, but always with an implied threat of punishment or escalation (Schneider &

³⁸⁵ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Page 109.

³⁸⁶ Page 42.

³⁸⁷ Pages 25-33. Citing prospect theory, they described KJI as in a "losses" frame of mind, where the risk-propensity of his decision-making was organized around continued prospects of losing what his country had, more than trying to gain new benefits. These losses might include: the inability of *juche* to attract and change either South Korea or Japan as KIS predicted; loss of Communist aid and political undergirding; economic and military decline; and international isolation.

Post, 2002).³⁸⁸ This may actually reflect a lower risk tolerance overall since national survival now relied on deterrence, while coercion was used to affect North Korea's relative position and well-being. Likewise, North Korean behavior regarding Japan's BMD development reflected a move from more risk tolerance in the period of the North's strategy of confrontation to risk aversion in the period of ballistic missile-dominated coercion, the latter of which paralleled the maturing of Japan's BMD deployed in 2007 and postured against North Korea's missile test in 2009. Despite the challenging nature of Japan's BMD program, or perhaps *because of it*, KJI's risk tolerance toward Japan in his overall coercive strategy was lower than that toward ROK since a more violent course of action was taken against ROK. KJI chose less overt responses to Japan's challenge to the North's ballistic missiles with its BMD program. He did not, however, abandon his ballistic missile program and, in fact, expanded ballistic missile deployment.

³⁸⁸ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Pages 129-30. According to Baird, dramatic changes of "strategic decline," most evident since the end of the Cold War period, reflected two broad and different North Korean perspectives on security-related risk. Regardless of period, however, Baird argued North Korean leaders always engaged in careful risk assessment and decision calculation (the end of the Cold War era is comparable to the beginning of the dissertation research period). The key factors shaping North Korea's new calculus of its national security included: it was now diplomatically weak; its economy was in perpetual decline; its population was shrinking; its military manpower was declining; its conventional weaponry was old and inferior; and, it continued to lose control over the people. The earlier risk "calculus" was closely associated with a decision to reunify the peninsula through war as described above, even should China and the Soviet Union be unwilling to fight alongside North Korea. When the Cold War ended, along with substantive support from a broader community of like-minded Communist states, North Korea's risk calculus changed to one oriented around decisions to take coercive action. Examples of North Korea's shift to a new security calculus can be seen in the 1990s. In April 1993 North Korea announced its intent to withdraw from the Nuclear Nonproliferation Treaty and deny international inspectors access to its nuclear program. North Korea was unsure what actions the West might take, but given its new security calculus it sought to make as many gains as possible without giving up much. In October 1994 North Korea signed the Agreed Framework regarding controls on future nuclear-related activities in exchange for light water power reactors and oil. Japan contributed to the financing of the reactors. North Korea maintained control of the plutonium it had already reprocessed, however, providing it the means of deterrence through nuclear weapons. Such threatening capabilities enabled North Korea to create a climate of instability in exchange for international aid, essentially keeping the country, and the regime and its leadership, afloat. Pages 130-1 and 139. For example, the August 1998 missile test that overflew Japan was a "nuanced" method of pressure or coercion, implying the threat of worse action in the future if regional actors did not provide North Korea needed concessions.

Health.

Health is a legitimate factor that could affect a decision-maker's cognitive processes and, therefore, his perceptions and decisions (Roberts, 1988).³⁸⁹ KJI was not immune to health struggles. For example, despite rumors to the contrary in the 1990s, KJI appeared healthy to those foreigners who actually engaged with him (Oh & Hassig, 2000).³⁹⁰ However, he suffered a stroke in August 2008, appearing later as frail and raising questions of leadership succession. But the effects the stroke had on KJI's decision-making capacities was not known for certain (Seth, 2010).³⁹¹ The patterns of North Korean decisions and behavior, however, did not seem to change in any substantial way owing to KJI's health struggles near the end of his life.

Emotive Factors.

Though a careful decision-maker, KJI may have also been influenced by emotional stimuli affecting his decisions, though none of these appear to be extreme or without any consideration of consequence. For example, KJI allegedly ordered the bombing of a ROK airliner in 1987 out of "frustration" that North Korea had been unable to stop the Olympics from occurring in Seoul the following year (Eberstadt & Ellings, 2001).³⁹²

KJI was also influenced by respect toward him, or lack of it, coming from foreign leaders. For example, in the Bush administration, U.S. leaders used disparaging terms for

³⁸⁹ Pages 181-3. Roberts suggested physical and mental health can also be significant factors in the decision-making of leaders in crisis.

³⁹⁰ Pages 91-5, including note 25.

³⁹¹ Page 218.

³⁹² In Chuck Downs chapter, "Discerning North Korea's Intentions." Pages 99-100. According to the one surviving perpetrator (the other committed suicide in custody), it was KJI who ordered and directed the placement of a bomb onto Korean Airlines flight 858 on November 29 1987, killing all 115 onboard when the bomb detonated in flight en route to Seoul.

KJI, leading to North Korean anger and difficulties in diplomacy. The North told South Korean diplomats in 2005 that arms control discussions might move forward if the North “gets appropriate respect from the United States” (Herman, 2005).³⁹³ That same year, North Korean media praised President Bush when he called KJI “Mister” in a news conference (Kelley, 2005).³⁹⁴ Another KJI favorable response to Bush came in 2007 after Bush sent a private letter to KJI regarding the North’s nuclear program and addressed the letter “Dear Chairman” (N. Korea's Kim Responds Favorably to Bush Overture, 2007).³⁹⁵

KJI possessed a high confidence as leader and was greatly influenced by personal and national honor and pride. However, such confidence in extremis can skew rationality and discount caution with respect to risk. For example, Keith Payne provided three historical cases in which otherwise sane and rational adversary leaders demonstrated “blinding chutzpah,” or supreme self-confidence if not gall, in the name of honor or mission resulting in deterrence failure. Payne argues from these cases that deterrence can and will fail with regional actors like North Korea, not because a leader is “irrational” – in fact, he argues “rogue leaders may well be fully rational.” Rather, deterrence can fail because those seeking to deter them may not understand how they calculated, including their emotive and other factors (Payne, *The Nuclear Posture Review: Setting the Record Straight*, 2005).³⁹⁶ Chutzpah may have been part of the psychological makeup in KJI’s

³⁹³ Original source is the Associated Press.

³⁹⁴ Vice President Cheney, for example, referred to KJI as “irresponsible” and “oppressive.” Original source is the Associated Press.

³⁹⁵ The Bush letter was dated 1 December 2007.

³⁹⁶ Pages 139-40. These cases included Japan’s war minister in 1945 arguing in the name of honor to continue fighting after the U.S. dropped the first atomic weapon; Cuban leaders in 1962 advocating nuclear war to aid socialism’s triumph; and, Argentine’s military leader in 1982 choosing to occupy the Falkland Islands under the presumption the geographically distant United Kingdom would not respond militarily.

decision-making and behavior—an assessment comparable to others provided above in terms of his confidence and sense of honor as North Korea’s leader.

Given North Korea’s history of invasion, intervention, or occupation, KJI was sensitive to perceptions of foreign encroachment. In a study done for the DoD, it was argued the psychological effects of military maneuver, including encirclement or equipment loss, were significant, accounting for 60 percent of the reason the opponent altered course (Hasslinger, et al., 2002).³⁹⁷ This process of influence is the deterrence process of how Japan’s BMD could affect North Korean leaders psychologically. In this case, Japan’s BMD would not “encircle” North Korea but would shape KJI’s views of losses he’d incur with his ballistic missile force if he tried to attack Japan with a ballistic missile raid—a higher number owing to Japan’s BMD.

³⁹⁷ Pages 21-2. The study argued the way to alter an opponent’s will to act or behave in a certain way is to affect his underlying beliefs that inform his decision-making. The goal is to play upon his reason and cognitive processes to alter his perceptions of various consequences of his decisions, such as losses and hopelessness.

CHAPTER SIX: STRATEGIC PROFILE

PART II—ENVIRONMENTAL FACTORS

General

As leader of North Korea, KJI's national security strategic culture reflected the nation's identity and culture described in the Profile's Part I, and emphasized independence, sovereignty, and survival. Shaped by this identity, he was also informed in his national-security related strategy and decision-making by important internal and external environmental factors in existence during his reign as leader. Internal factors included: formal and informal political organizations and processes, reflecting KJI's position, power, and control over affairs; North Korea's military power, a relatively vast set of capabilities considering North Korea's size, population, and GDP; the nation's economy as an instrument of supporting military needs; and, issues of internal social well-being and unrest that may inform, or detract from, KJI's national security strategy. Such internal factors not only informed KJI's decision-making but were also included among his tools of policy as he acted, behaved, and related with other actors in the region and international system. External environmental factors include: diplomacy and communication, consistent with North Korea's state-level strategy of coercion, if not extortion; and North Korea's relations and interactions with others, including the U.S., ROK, Russia, China, and Japan. The North's relations with Japan are revisited to address the historical context and strategy of North Korea toward Japan and political rapprochement and related issues. KJI's interface with internal and external environmental factors was consistent with his personal and national identity and cultural

factors. Part II of the Profile begins with a description of the internal environmental factors.

Internal Environmental Factors

Political

The political processes and organizations through which KJI led were significant factors in his national-security related decision-making. These political features also demonstrate his sole position as leader of the state and executive of its security and foreign policies, including the North's conflictual and cooperative interaction with regional actors such as Japan. KJI organized the political processes and advisors to suit his personal style and notion of effectiveness. These included military and party channels and a limited number of trusted interlocutors to ensure control of strategy and message. Choy and Kim argued KJI used a conflict-oriented decision-making process that can have its political arm dealing cooperatively while its military arm can be engaged in conflictual activities, as was the case in 1999 when KJI and the Korean Workers Party (KWP) engaged in reconciliation with South Korea while North Korean military attacked ROK naval assets (Choy & Kim, 2011).³⁹⁸ While he was not informed of every analytic detail of policy issues, KJI's decision-making was characterized by close control of the people who interacted with him personally and those who carried out his decisions. He orchestrated all promotions to power and individuals or organizations permitted open

³⁹⁸ Pages 12-4. They describe alternative decision-making styles that could exist in North Korea, such as the monolithic system whereby KJI was in total control of every detail of policy, from analysis to decision, execution and monitoring, for example. They also considered a highly competitive style in which more lively debate and discussion occurred at multiple levels. They set aside both of these as too extreme and unlikely. This type of decision-making process is also more closely related to KJI's brinkmanship style and use of provocations. Lastly, they argued KJI was in fact sensitive to the condition of the people, perhaps less so from an emotive response, but at least from the view that it could endanger his regime's survival if he did not pay attention.

opinion. KJI's decision-making was facilitated by two groups of advisors. The first group, a smaller inner circle, was comprised of close relatives, such as his sister and brother-in-law, and long-time family allies. These individuals held senior posts in key institutions of power and formed a kleptocracy to acquire and manage large amounts of foreign currency for KJI and his interactions with others. A second group, or outer circle, furthered KJI's control of power and was dominated by KPA officials (Schneider & Post, 2002).³⁹⁹

Military-related decisions flowed from KJI through two chains of command, both of which were directly under his personal control. The first was a combination of Korean Worker's Party (KWP) and Korean People's Army (KPA), where the KWP's Central Military Committee provided party leadership over the military and the KPA's General Political Bureau. The second chain was the National Defense Commission (NDC), comprised of senior military, security, and military industry leaders. Unlike the U.S. National Security Council, the NDC did not have representatives from the economy nor foreign affairs (Schneider & Post, 2002).⁴⁰⁰ North Korea boasts of its military capabilities, including its ballistic missile program, to all domestic groups. For example, in 1998 it tested its Taepodong missile just days prior to a key legislative session, presumably to satisfy domestic needs for protection and, more practically, continued governmental support and funding for North Korea's military first policy and missile

³⁹⁹ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Pages 114-5.

⁴⁰⁰ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Pages 115-6. Such was the control of KJI that in 2000 he reportedly engaged U.S. Secretary of State Albright with technical details regarding ballistic missiles without the aid of any advisors or time to study the matter.

forces (Pollack, 2004).⁴⁰¹ Domestic support notwithstanding, changes to North Korea's ballistic missile testing program include flying test missile profiles in new, more compliant ways and flight testing from a new facility further away from Japan. Such changes may be sufficient to placate domestic audiences while responding to deterrent pressures from Japan.

Military Power

One of the core instruments of power and source of KJI decision-making regarding national security, including his ballistic missile-backed coercive strategy with regional actors like Japan, was his access to the nation's military capabilities. Though a small nation in terms of population and economic strength, North Korea's military has for decades earned respect as a potent force among domestic and foreign audiences. KJI oversaw the decline in combat effectiveness since the end of the Cold War and, at the same time, emergence of a nuclear weapons program and increasingly capable ballistic missile force. These capabilities were sources of domestic pride but instrumental in North Korea's strategy of confrontation and, in a shift during the past two decades, one of coercion. North Korea's military power is discussed below beginning with KJI's oversight and a summary of the policy, doctrine, and strategy.

Political Oversight.

Organization and Spending

The entirety of North Korea's armed forces was directed by KJI as North Korea's Supreme Commander of the Army and in his capacity as Chairman of the National

⁴⁰¹ One month prior to the August 1998 Taepo Dong missile test, North Korea elected its new parliament. Its first parliamentary meeting was held just five days after the TD-1 launch. Such activities are used to solicit calls for support for its "military first" policy. In Narushige Michishita's chapter, "North Korea's Military-Diplomatic Campaign Strategies: Continuity versus Change." Page 70.

Defense Commission (French, 2007).⁴⁰² As North Korea's missile forces grew in numbers and range, KJI reorganized them more along the lines of those found in Russia and China. According to official Korean Central News Agency (KCNA) and South Korean media sources, North Korea renamed its missile forces the "Strategic Rocket Force Command" (Pollack J. , 2012).⁴⁰³ Doing so not only provided KJI perhaps an improved organizational and command structure, but may have been intended to portray a more formidable coercive and strike capacity on par with larger states like Russia, China, or the United States, adding to the strategy of fear and intimidation of others while strengthening personal and national pride. North Korea's nuclear program is operated by its Atomic Energy Industry, though all policy decisions originated from KJI through his leadership in the NDC (Medalia, 2009).⁴⁰⁴ North Korea invests a considerable amount of its total energy and budget upon military power. Japan's Ministry of Defense (MOD) cites North Korean government sources officially stating its defense spending was 15.8% of GDP, though the Japanese MOD believes it to be higher (Defense of Japan 2012, 2012).⁴⁰⁵ According to the U.S. Congressional Research Service, it spends upwards of 40% of its gross domestic product (GDP) on its military, with most funding devoted to strategic systems including WMD and ballistic missile capabilities (Hildreth, 2009).⁴⁰⁶

Policy, Doctrine, & Strategy

⁴⁰² Page 222. Upon KJI's death in December 2011, his son, Kim Jong-Un, took over leadership of North Korea, including title of Supreme Commander, presumably giving him command and control of North Korea's nuclear weapons (Gopalakrishnan, 2011); citing Daniel Pinkston.

⁴⁰³ See also TheJournal.ie report (North Korea says its rockets can hit the US, analysts say it's bluster, 2012).

⁴⁰⁴ See the Summary page (unnumbered) and page 6. However, upon KJI's stroke in August 2008, nuclear-related policy decisions were made in the NDC through a more collective group under the leadership of KJI's brother-in-law, Chang song-taek.

⁴⁰⁵ Page 15.

⁴⁰⁶ Page 3.

North Korean military doctrine and strategy reflects a blend of Chinese, Soviet, and North Korean thought and experiences that morphed into the North's strategy to face its unique position in the modern era. Early on, KIS was heavily influenced by experiences fighting the Japanese and close interaction with Chinese and Soviet Communist leaders; early North Korea strategy was largely a reflection of Soviet thinking with large armies in conventional warfare postures. However, the Korean War provided North Korea with other experiences that, combined with the decision by KIS to secure North Korea in a more politically independent position from the Soviet Union, led to significant shifts doctrinally. Operationally, the North adopted mobility of its forces including "lightning" strikes, the ability to provide firepower at all ranges and levels of conflict to include "deep strikes," and strong command and control from the top (Savada, 1994).⁴⁰⁷ Until the late 1980s much of the North Korean planning for war centered on conditions suitable for violent reunification, taking advantage of ROK political and military vulnerabilities and devastating attacks on Seoul, just across the DMZ (Schneider & Post, 2002).⁴⁰⁸

⁴⁰⁷ Pages 246-9. One shift was in 1962 when KIS sought to "fortify the entire country." In practice, this embraced more of a Maoist strategy of being prepared for protracted war, and greater encroachment of military and technological needs upon the nation's economic capacity. These ideas were also adopted into the constitution in 1992. The warrior attitude in Korea's northern kingdom notwithstanding, Hwang argued the military in Korean history was consistently subordinate to civil elites, both to organize and to rule (Hwang, 2004); pages 323-8. The modern prominence of military elites, then, is likely more a function of ancient Korean history, Japanese imperialism and the exigencies of the Korean and Cold Wars. According to Pinkston, North Korea's leaders, starting with KIS, were very sensitive to the vulnerabilities of Korea in the past—a position that could have prevented foreign attacks and imperial conquests through a strong military (Pinkston, 2008); page 3. KIS also developed four primary guidelines regarding the military, effectively militarizing the country even before KJI took power: equipping all the people with arms; transforming the whole country into an impregnable fortress; converting the whole army into an army of cadres; and, modernizing the military establishment (Pollack J. D., *Korea: The East Asian Pivot*, 2004); in Seung Joo Baek's chapter, "North Korea's Military Buildup and Strategic Outlook," page 201.

⁴⁰⁸ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Pages 125-8 and 130. North Korea also required an assessment the U.S. military would not likely wage war on behalf of ROK, a condition also dependent upon U.S. basing access of its forces in Japan.

KJI transformed the center of ruling power in the late 1990s and early 2000s around his “military first” policy (“songun chongchi”), formalized as policy in 1998. A military related policy, Kim placed its centrality, along with economic and other key responsibilities, within the NDC and relegated ideology to the now weaker Party. In 2003, the policy and all essential power brokers, including younger confidants of KJI, were appointed to the NDC by the Eleventh Supreme People’s Assembly (Kihl & Kim, 2006).⁴⁰⁹ The military first policy was also promoted with the reminder to people that even KIS created the army before the party.

North Korea also embraces deception, “cunning,” surprise, and provocation and deterrence in the use of its military capabilities.⁴¹⁰ It used surprise frequently including the 1998 Taepo Dong missile test. North Korean leaders calculate surprise into their decision-making, seeking to catch their opponents off balance and perhaps more willing to cede to North Korean political goals (Pollack, 2004).⁴¹¹ More generally, given the changes in regional military and economic balance of power over the past 25 years, North Korea chose to press provocative behavior to get what it needs to stop the bleeding in the imbalance, and chose to do so through a deterrent foundation. According to Taik-young

Quick victory would yield substantial material gains from the South, offsetting potentially high losses in the North.

⁴⁰⁹ Pages 64-5. This move helped consolidate KJI’s power by effectively sidelining some of the older leaders of his father’s generation, people who may not have been as loyal to KJI. The intention was to protect the nation from yet another invasion, since without such a policy North Korea would be “swallowed by outside forces” (French, 2007); pages 218-9. North Korea’s military has remained conservative as a community. For example, its elite have maintained a traditional, hardline stance in its opposition to external threats (Jung, 1998); page 343.

⁴¹⁰ Minnich suggests North Korean ideas of warfare center on deception, a Sun Tzu idea, and involve various types of military action reflecting an overall “cunning” principle of war, including: demonstrations; feints; raids; and inciting fratricide or attrition (Minnich, 2005); page 76.

⁴¹¹ In Narushige Michishita’s chapter, “North Korea’s Military-Diplomatic Campaign Strategies: Continuity versus Change.” Page 64.

Hamm, the primary means of this psychological strategy were its asymmetric WMD capabilities (Yun & Shin, 2006).⁴¹²

Capabilities.

North Korea possesses a wide variety of military capabilities that undergirded KJI's political strategy and informed his decision-making. The section below addresses the overall posture and readiness of these forces and then specifics of the capabilities emphasizing those most threatening to Japan.

Posture/Readiness

For years a regional conventional military power, since the end of the Cold War (and on KJI's watch) North Korean conventional forces have trended downward while its nuclear and ballistic missile capabilities have trended upwards in numbers and, in some ways, technology such as increasingly longer-range missiles. Cucullu suggests most functional areas now lag sufficiently behind that North Korea could not prevail against South Korea, even if the U.S. provided no conventional military support. Lagging areas include: artillery, armor, air, infantry weapons, communications, logistical, transportation, and support capabilities (Cucullu, 2004).⁴¹³ Military exercises are down 50% due to costs and availability of fuel (French, 2007).⁴¹⁴ Decline in military readiness can be seen in reductions in training, maintenance, and fuel availability—all essential warfighting capabilities (Bluth, 2008).⁴¹⁵ In terms of personnel, while maintaining an army of one million soldiers, successive reports since the mid-1990s reflect malnourishment, disaffection among troops, stunted growth, hunger, and changes to

⁴¹² In his chapter, "North Korea: Economic Foundations of Military Capability and the Inter-Korean Balance." Page 184.

⁴¹³ Page 268.

⁴¹⁴ Pages 221-2.

⁴¹⁵ Page 145.

minimum height requirements for Korean People's Army (KPA) recruits down to 4 feet, 11 inches (the lowest in the world) (French, 2007).⁴¹⁶

An overall defensive posture now exists and likely reflects realities in balance of power estimates as North Korean leaders survey the military landscape in the region, though this posture pertains principally to notions of military conquest of the Korean Peninsula. No longer the strongest conventional power on the peninsula, North Korea emphasizes deterring external attack principally through its nuclear weapons. Reliance on nuclear weapons has permitted North Korea to displace its reliance on its aging conventional armies and compensate for its inability to compete technologically on a modern battlefield (though it has increased its technological endeavors in nuclear and ballistic missile technology). Further, the North uses its nuclear weapons program and ballistic missile capabilities to extort foreign aid, gain recognition, and strengthen its diplomatic position (French, 2007).⁴¹⁷ The North's strategy of political coercion of its neighbors stems, therefore, from a stronger, not weaker, position as it senses less likelihood of external attack to topple its regime and greater freedom of action, such as provocations and missile launches, in conditions short of war.

Conventional

Militarily, North Korea is the world's most militarized state, with the highest proportion of population either on active duty or in reserve status. Most of its formidable ground forces were located in proximity of the ROK border, close to the Demilitarized Zone (DMZ), and deployed for peninsular combat if needed. North Korea also possessed substantial naval and air assets, though most of these general purpose forces are of older

⁴¹⁶ Pages 221-2.

⁴¹⁷ Pages 223-4 and 228.

Soviet design (Schneider & Post, 2002).⁴¹⁸ As mentioned above, the conventional forces of the North have experienced a considerable qualitative decline, though some suggest this in part reflects leadership choices to rely increasingly upon ballistic missiles and WMD and a strategy more of political coercion over confrontation between large standing armies across the divide.

Weapons of Mass Destruction (WMD)

The North Korean WMD threat is of significant concern to Japan, ROK, the U.S., and others. North Korea had an infrastructure since the 1960s to produce biological weapons and maintained large stockpiles of chemical warfare agents. Despite internal hardships, according to both Japanese and U.S. officials, North Korea presented a significant threat: ballistic missiles armed with conventional high-explosive, biological, or chemical warheads. Several factories in North Korea were reportedly producing “toxic gas and germs,” according to the Japanese Defense Agency (Kiziah, 2000).⁴¹⁹ Biological agents, including anthrax, smallpox, and cholera, could be used to disrupt U.S. forces in conflict on the peninsula or as strategic terror weapons via missile against Japan (Scobell & Sanford, North Korea's Military Threat: Pyongyang's Conventional Forces, Weapons of Mass Destruction, and Ballistic Missiles, 2007).⁴²⁰

North Korea possesses a variety of WMD means of delivery, including special operations military forces, aircraft, artillery and rockets, and anti-ship cruise missiles. However, the most dangerous means of delivery is North Korea's large stockpile of ballistic missiles (discussed in more detail below). While it has had technical assistance

⁴¹⁸ In Merrily Baird's chapter, “Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture.” Pages 122-3.

⁴¹⁹ Pages 4-5.

⁴²⁰ Pages 107-10.

for years from Russia, for example, North Korea is self-sufficient in ballistic missile development and production and, as the world's greatest ballistic missile proliferator, used ballistic missile sales to finance its missile program (Schneider & Post, 2002).⁴²¹

Nuclear Weapons

The North Korean nuclear weapons program reportedly began in the mid-1960s. North Korean motivations for pursuing nuclear weapons are debated among analysts and scholars. Generally, Scott Sagan suggests modern nuclear proliferant states are motivated by three basic patterns: basic national security (or, self-help); to please domestic audiences; or for changing their national identities before the international community. North Korea, he argued, likely fit into the basic security model (Sagan, 1996-1997).⁴²² All three elements probably resonated as motivations for North Korea's pursuit of nuclear weapons, though self-help was likely the most significant factor. More specifically, Bruce Cumings points to U.S. decisions regarding threatening regime change of regional actors following the 1991 Gulf War as instilling deep North Korean fears and contributing to their decision to acquire nuclear weapons (Cumings, *North Korea: Another Country*, 2004).⁴²³ This also explains the highly survivable manner in which they have built their

⁴²¹ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Pages 123-4.

⁴²² Page 85.

⁴²³ Pages 53-8. Cumings refers to the U.S. stationing of tactical nuclear weapons in South Korea, from the late 1950s through early 1990s, designed to be used within an hour of North Korean attacks southward to contaminate the battlefield and halt their movements. To North Korea, this amounted to nuclear blackmail. The effectiveness of Gulf War conventional combat technologies changed U.S. perspectives and, on 27 September 1991, President Bush directed the withdrawal of all U.S. tactical nuclear weapons, including about 60 still at Kunsan airbase in South Korea to be used by F-16 aircraft in wartime. The U.S. "Operational Plan 5027" was then revised so that the wartime effort would rely on ground forces pushing all the way to Pyongyang and conducting regime change without resort to use of nuclear weapons. These raised great fears in North Korea and the primary responses from North Korean leadership, especially when their economy and energy sources also began to dwindle in the late 1980s and early 1990s, was to pursue nuclear energy that would provide both electricity and a nuclear weapons capability of its own. U.S. tactical nuclear weapons in South Korea, beginning in January 1958, were deliverable in a variety of

overall program with sites being widely dispersed and hidden among a complex web of locations making its destruction from aerial bombardment all but impossible (French, 2007).⁴²⁴ The security motivation, coupled with its ballistic missile force, could also be divided further into deterring and coercing others, and guaranteeing one's survival (Wilkening & Watman, 1995).⁴²⁵

North Korea possesses two paths for acquisition of fissile material for nuclear weapons: a plutonium path, recovered from spent fuel rods at the Yongbyon reactor facility in the capital of Pyongyang; and a uranium enrichment program started later. The plutonium route produced a small number of nuclear weapons; however, it is not known if uranium enrichment has produced enough material to produce any nuclear weapons (Schneider & Post, 2002).⁴²⁶ North Korea's nuclear weapons inventory is difficult to assess, though analysts currently judge it to possess perhaps six plutonium-based

means, including at least the following: 280 mm cannons; Honest John missiles; Matador cruise missiles; F-4 fighter aircraft; atomic demolition mines (ADMs) carried in Jeeps, man-portable backpacks, and helicopters; and F-16s. Most were deployed very close to the DMZ with the concept of routine use in the event of war, especially under fear that if they did not use them early they could fall into North Korean military hands. While emphasis is placed on the North's development of nuclear weapons, it cannot be forgotten that ROK also began a secret nuclear weapons development program in the 1970s with the aid of France. The goal was to create a capable nuclear weapons and missile program to demonstrate self-sufficiency for its security, lacking confidence in the U.S. commitment to its defense. The U.S. opposition eventually swayed ROK to abandon the effort (Oberdorfer, 2001); pages 68-73.

⁴²⁴ Pages 278-9. The program is comprised of various parts including research and development, fuel and its processing and storage, weapons technology, production, means of delivery, and command and control. One estimate from a senior U.S. intelligence official put the aerial sortie total as high as 240,000 strikes over 60 days.

⁴²⁵ Page 32. According to Dean Wilkening and Kenneth Watman, regional adversaries including North Korea acquire nuclear weapons for three primary purposes: to deter the U.S. from intervening in conflict in their region; to intimidate or coerce U.S. allies in that region; and, to provide a guarantee of the adversary's survival.

⁴²⁶ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Pages 123-4. According to Jonathan Pollack, just as North Korea's link between the Yongbyon nuclear reactor and a stated goal of producing electricity rather than nuclear weapons is suspect (its 25-year output yielded the equivalent of only 23 days' worth of electricity from a modern light water reactor), so, too, is North Korea's claim that a newer uranium enrichment capability will feed a light water reactor now under construction suspect. Both are likely for nuclear weapons production and North Korea will not likely walk away from its nuclear weapons capability (Pollack, *No Exit: North Korea, Nuclear Weapons and International Security*, 2011); pages 184-6.

weapons (Gopalakrishnan, 2011).⁴²⁷ Others put the number between 6-12 weapons (Samore, 2004).⁴²⁸ Analysts at the Arms Control Association think the number is closer to 10 weapons (Nuclear Weapons: Who Has What at a Glance, 2012).⁴²⁹

Today, with a limited number of weapons, North Korea's goals are thought to be intrinsically political through possession of these weapons: (1) obtain guarantees of North Korean state survival (i.e., promises particularly from the U.S. to never attack); (2) normalization of relations; and, (3) aid in economic stability (Bluth, 2008).⁴³⁰ More specific nuclear employment or targeting doctrine is not known. As a result, some suggest North Korea simply maintains a policy of nuclear "ambiguity," similar to that found in the early years of Chinese nuclear deployment, or that of Israel. As to targeting, in part due to limited accuracy of the missile delivery systems, North Korea's nuclear weapons may only be more "terror" weapons used against cities. Another possibility was that KJI guarded the secret, perhaps leaving it unwritten or unspoken at all (Scobell & Sanford, North Korea's Military Threat: Pyongyang's Conventional Forces, Weapons of Mass Destruction, and Ballistic Missiles, 2007).⁴³¹ North Korean nuclear and ballistic missile capabilities also combine to potentially give it the capability to produce electromagnetic pulse (EMP) effects by launching a missile high into the atmosphere and exploding the weapon (National Security and Electromagnetic Pulse, 2006).⁴³² This could be employed in an effort to disrupt Japan's BMD capabilities.

⁴²⁷ The article does not specify a source for the number of weapons.

⁴²⁸ Page 48.

⁴²⁹ See "States of Immediate Proliferation Concern."

⁴³⁰ Pages 148 and 155.

⁴³¹ Pages 87-93.

⁴³² Pages H6352-H6354. Not only has the North restrained from discussing this, making such an assessment is complicated by the fact that the exact nature of its ability to deliver nuclear weapons and how many weapons it may have are also not known with certainty. The effects could be widespread disruption of communications and electrical circuits and infrastructure. Militarily, this could aid the North

Ballistic Missiles

North Korea's current and emerging ballistic missile programs started with joint projects with China in the mid-1970s that included delivery of a Scud B for "reverse engineering" purposes in 1981. This led to North Korean development of its own missile (tested in 1984), the Scud C version (tested in 1990), development of the Nodong missile in 1989 (tested in 1991 and 1993), and the Taepodong missile family (first observed in 1994 and tested in 1998) (Ranger, 1998).⁴³³ North Korea has also conducted preliminary research of a submarine-launched ballistic missile (SLBM). Of the various North Korean ballistic missiles, those that can potentially range Japan are of the most interest here and include: the Nodong MRBM; Musudan IRBM; Taepodong IRBM; and the SLBM. Both the Nodong and Musudan are operationally deployed and direct threats to all of Japan proper. Each of these is addressed below, followed by North Korea's ballistic missile targeting and missile production factors.

A newer North Korean missile of interest to Japan is the Nodong (also called Rodong) missile, tested in May 1993 from the Musudan-ri test site and landing to the east into the Sea of Japan. With a range of 1300 kilometers and an accuracy of perhaps 2 kilometers, the Nodong can reach all of Japan's territory and strike soft military targets (such as airfields) or be used as a political weapon against cities such as Tokyo. Bluth

in battle on the peninsula. Reportedly, North Korea has received scientific assistance from Russia, China, and Pakistan possibly to include help in developing an EMP weapon for North Korea.

⁴³³ Pages 37-42. Lennox described the threat perceptions of North Korea as political perceptions, believing North Korea's pursuit of asymmetric capabilities (ballistic missiles and WMD) would dissuade Western powers from intervening so easily in the region. This logic placed considerable pressure upon Japan to act, which is precisely what it chose to do with joint missile defense development with the United States and deployment of its own BMD system. In this same volume, Dr. William Schneider claimed the Nodong began series production in 1993, following only one test (not two), and subsequently underwent operational deployment. See page 110.

argues the Nodong's strategic purpose is just that: Japan (Bluth, 2008).⁴³⁴ Nodong deployment began in 1995 and by 1997 at least 10 Nodong missiles were operationally deployed (Pinkston, 2008).⁴³⁵ The number of deployed Nodong varies, perhaps reflecting increased production and deployment over time. According to Japan's Ministry of Defense, North Korea had about 200 Nodong missiles deployed (Hildreth, 2009).⁴³⁶ Others suggest 240 (Samore, 2004),⁴³⁷ still others argue North Korea could have as many as 320 Nodongs deployed (Samson, 2010).⁴³⁸ The Nodong missiles are road-mobile systems, making them very difficult if not impossible to find and destroy before they were launched. This provides Nodong a high level of survivability and could allow North Korea to use them in surprise attacks on Japan (Pinkston, 2008).⁴³⁹

Another missile, the Musudan (also called Nodong B), is an entirely new road-mobile IRBM under development, though it has not been flight tested and possibly not deployed (Pinkston, 2008).⁴⁴⁰ However, others believe Musudan missiles have been deployed in limited numbers—perhaps fewer than 50 (North Korea: Missile, 2012).⁴⁴¹ According to Joseph Bermudez, however, the number of deployed Musudan is higher, between 75 and 150 missiles (Bermudez, 2011). The Musudan has longer range than Nodong, extending it a capability as far as perhaps Guam (Ballistic Missile Defense

⁴³⁴ Pages 161-2. Three more Nodongs were tested in July 2006 (Scobell & Sanford, *North Korea's Military Threat: Pyongyang's Conventional Forces, Weapons of Mass Destruction, and Ballistic Missiles*, 2007); page 116.

⁴³⁵ Page 20.

⁴³⁶ Page 4. Bluth also suggests 200 Nodong are operationally deployed (Bluth, 2008); pages 161-2.

⁴³⁷ Pages 67, 71-4, and 105.

⁴³⁸ Page 11. Larry Niksch of the Congressional Research Service and other analysts also suggest 320 Nodong (Gopalakrishnan, 2011); they also suggest North Korea could, within two years, have the capability to miniaturize a nuclear warhead on the Nodong.

⁴³⁹ Page 47.

⁴⁴⁰ Pages vii and 23.

⁴⁴¹ Introductory paragraph.

Review Report, 2010).⁴⁴² The Musudan and Nodong missiles could, therefore, combine to threaten Japan with nearly as many as 470 offensive ballistic missiles. The size of the North Korean ballistic missile threat capable of striking, even aimed at, Japan has continued to increase, possibly as a response to Japan's BMD.⁴⁴³

Deployment levels of Nodong are somewhat difficult to assess since Nodong is also used as the first stage of the larger Taepodong-1 IRBM missile (which overflew Japan in a 1998 flight test). It is unknown if, or how many, Taepodong may actually be operationally deployed since some assess TD-1 may only be for technological development (Pinkston, 2008).⁴⁴⁴ Bermudez, however, does not assess Taepodong to be deployed at all (Bermudez, 2011). The ICBM-class Taepodong-2/3 are also not assessed to be deployed as a weapon; however, if or when they deploy, their range inherently makes them more of a threat to the U.S. not Japan.

North Korea is also developing a submarine launched ballistic missile (SLBM). The SLBM, though an unlikely technological accomplishment anytime soon, is based on Russian technology and North Korea continues to receive Russian technical assistance on its development. Should North Korea be able to deploy an SLBM it would potentially be able to threaten the U.S. and regional actors in new ways, also complicating the BMD

⁴⁴² Page 5 including the map of North Korea.

⁴⁴³ Increasing the size of potential missile "raids" is one of three broad types of responses a regional adversary could employ to friendly BMD (Ballistic Missile Defense Review Report, 2010); see page 8. The other two responses include use of solid fuels and deploying technical countermeasures on the ballistic missiles. According to Martin Sieff, solid fuel technology allows the missile to be set up and launched much more quickly and reliably than liquid fuel missiles, possibly denying warning time to those with BMD. North Korea has developed a solid-fuel short-range ballistic missile that demonstrates the North has the technological expertise to develop responses to BMD including use of solid-fuel missiles (Ballistic Missile Defense Review Report, 2010); page 5. As mentioned in chapter two of this dissertation, Japan could potentially defend against 165 (of North Korea's 470 that can range Japan) incoming ballistic missiles, leaving North Korea with potentially over 300 missiles with which to strike an undefended Japan.

⁴⁴⁴ Page 23 and Table 2 on pages 50-1.

postures of Japan and the U.S. (Hildreth, 2009).⁴⁴⁵ But the claim alone of working on an SLBM is clearly a source of North Korean pride regardless of the missile's status.

Depth of potential North Korean targeting capacity with its ballistic missiles includes those that can strike targets in four rings: in South Korea (including the Scud-based Hwasong-5 and -6 and Scud-D); in Japan (Nodong and Musudan); U.S. targets throughout the Pacific, such as Hawaii and Alaska (Taepodong 1); and, targets in the continental U.S. (Taepodong 2) (Scobell & Sanford, *North Korea's Military Threat: Pyongyang's Conventional Forces, Weapons of Mass Destruction, and Ballistic Missiles*, 2007).⁴⁴⁶ North Korean targeting is also affected by the potential employment tactic used and countermeasures to BMD. One such tactic is a "raid" using multiple ballistic missiles, a threat demonstrated by North Korea with multiple ballistic missile launches in several tests (The Threat, 2012).⁴⁴⁷ Another way North Korea could enhance the targeting capability of its offensive ballistic missile force is through development and deployment of various countermeasures on the missile to defeat an opponent's BMD system. While doing so involves costs, such countermeasures may pale in cost to deploying a much larger number of BMD interceptors, new or enhanced radar systems, or developing new interceptors altogether. Some analysts, including senior U.S. intelligence officials, suggest North Korea has in fact developed some countermeasures (Ghoshroy & Neuneck, 2010).⁴⁴⁸

⁴⁴⁵ Pages 3-6.

⁴⁴⁶ Pages 115 and 124, including Figure 9.

⁴⁴⁷ See paragraphs five and six.

⁴⁴⁸ In Philip E. Coyle's chapter, "Challenges toward Building an Effective Operational BMD System," pages 47-8. The authors cite, for example, a 1999 report for congressional testimony by Robert Walpole, U.S. National Intelligence Officer for Strategic and Nuclear Programs, who stated North Korea, by the time it flight-tested its ballistic missiles, could already have developed various countermeasures, "including separating RVs, spin-stabilized RVs, RV reorientation, radar absorbing material (RAM), booster

While North Korea possesses hundreds of ballistic missiles, only a portion of them (perhaps as many as 470) can reach Japan. It is not known how many of these would be used against Japan in wartime scenarios. Pinkston, for example, provides a list of 24 total potential missile deployment sites in North Korea, 15 of which have the capability to deliver munitions onto “probable targets” inside Japan proper but also including its distant island of Okinawa to the south (Pinkston, 2008).⁴⁴⁹ The International Institute for Strategic Studies assessed the Nodong was intended to be a military and political strategic weapon able to reach Japan, but also to do so with chemical, biological, and nuclear weapons, in addition to a conventional blast munition. Operational deployment occurred in North Korea at two locations in the north and east, ideally suited for striking targets in Japan. Deployment is on mobile launchers that use underground tunnel networks to aid in surviving preemptive attack. Of note, the Nodong’s lack of precision makes it ill-suited for attacking U.S. military forces in Japan with any degree of confidence, effectiveness, or credibility; therefore, assessment is that Nodong is intended as a political weapon against Japan, not as a military instrument against the U.S. or its forces in Japan (Samore, 2004).⁴⁵⁰ Others assess North Korea uses Nodong against Japan simply as a “terror” weapon threatening an indiscriminate pattern of destruction and death against Japan’s major cities (Samore, 2004).⁴⁵¹ Further, North Korea reportedly has ballistic missiles specifically aimed at Tokyo, including nuclear power plants located

fragmentation, low-power jammers, chaff, and simple (balloon) decoys—to develop penetration aids and countermeasures.”

⁴⁴⁹ Pages 50-1, Table 2.

⁴⁵⁰ Pages 67, 71-4, and 105. The missile is simply a larger, single stage, liquid-fueled Scud, designed and produced indigenously by North Korea, though some Russian technical advising possibly occurred. Despite limited flight testing, North Korea also produced and exported perhaps hundreds of Nodongs to Pakistan and Iran which also successfully tested the missile and likely shared testing data with North Korea.

⁴⁵¹ See page 73 for the idea of Nodong as a “terror weapon.” The Nodong would do so by potentially holding Japan’s major cities hostage with missiles that can deliver conventional, chemical, biological, and perhaps nuclear weapons with an inaccurate missile making destruction indiscriminate.

there, as part of a campaign to terrorize Japan's citizens.⁴⁵² If so, this would directly threaten Japan's domestic population, not only in wartime scenarios involving general war on the Korean Peninsula and U.S. forces in Japan used in such a war, but also in limited contingencies or small-raid attacks on Japan completely separate from peninsular war scenarios. This threat, stated or otherwise, is a tactic of political intimidation in day-to-day, crisis, and prewar conditions not lost on Japan in its pursuit of BMD.

North Korean strategy may include use of its Special Operations Forces (SOF) in general war with Japan, but also as part of a missile "raid" scenario below the threshold of general war and direct U.S. involvement. Under these circumstances, SOF forces would secretly enter Japan to attack Japan's BMD assets, command and control, intelligence units, or U.S. assets at Japanese bases (Scobell & Sanford, *North Korea's Military Threat: Pyongyang's Conventional Forces, Weapons of Mass Destruction, and Ballistic Missiles*, 2007).⁴⁵³

North Korean ballistic missile production and domestic deployment levels is an important feature of the North's strategic threat, but may also offer insights into the impact of Japan's BMD upon North Korean value in its ballistic missiles. Disparity of analysis exists, however, over production and deployment levels. At the very least, missile exports have trended downward for several years (Pollack J. , *Ballistic Trajectory:*

⁴⁵² For example, Narushige Michishita argued North Korea, possibly fearing a U.S. preemptive strike following U.S. doctrinal change in 2002 reflecting preemption, had the capacity to respond with the use of large numbers of Nodong ballistic missiles to take Tokyo hostage. In his chapter, "North Korea's Military-Diplomatic Campaign Strategies: Continuity versus Change." Page 69. According to Kim Myung Chol, KJI's wartime scenario would include the launching of "long-range missiles loaded with highly effective warheads to Japanese and American strategic targets, such as nuclear power plants" (Pollack, 2004); in Seung Joo Baek's chapter, "North Korea's Military Buildup and Strategic Outlook," page 212.

⁴⁵³ Pages 45-6 and 58. Getting SOF to Japan may be more difficult than before as North Korean air force capabilities have been allowed to decline in part because of its growing ballistic missile threat capability. North Korean naval assets could still likely accomplish this mission, however.

The Evolution of North Korea's Ballistic Missile Market, 2011).⁴⁵⁴ North Korean value in ballistic missiles is likely still very high and sufficient missiles for operational, coercive and wartime purposes already exist in North Korea's inventory to preclude further production and deployment. Further, missile production has not ceased and, for some missiles like Nodong, production has apparently continued in recent years in order to expand the numbers deployed.⁴⁵⁵

North Korea's ballistic missile capabilities are well-suited to serve the North's political coercion strategy against ROK, the U.S., and Japan. To be sure, North Korea possesses a large inventory of ballistic missiles capable of striking targets in Japan, and the North could do so in wartime. However, only one or a small number would be needed for coercion purposes in day-to-day conditions or pre-war scenarios. Short of direct missile attack, flight tests overflying Japan would also be expected as they serve the North's coercion strategy. This is what occurred in 1998 with the TD-1 flight over Japan. However, that ballistic missile flight appeared to be the seminal missile event that altered the equation in Japan-North Korea relations and how the North approached Japan, especially with the use of ballistic missiles. While North Korean missile tests occurred on later occasions, there has not been, to date, another surprise missile flight over Japan in the same manner as the 1998 test: later tests either flew with full advance announcements through the UN for safety purposes; North Korea tested shorter-range missiles; or, the North flew missiles in southerly trajectories using its new test launch facility. The key

⁴⁵⁴ Pollack provides a variety of reasons to explain this, including international pressures, lower demand, and presence of regional BMD.

⁴⁵⁵ While missile production is imprecise at best, Pinkston argues missile production has not been immune to general industrial capacity decline stemming from severe economic conditions the past two decades (Pinkston, 2008); pages 44-5.

difference from 1998 to date has been the assertive pursuit of BMD by Japan to address North Korean ballistic missiles.

Space

North Korea used its Taepodong missiles to support its efforts to place a satellite in space and become a space-faring nation, joining an elite international club and demonstrating technological advancement with which it can garner national honor and pride.⁴⁵⁶ After five past failures beginning in the 1990s, North Korea successfully placed a satellite into orbit on 12 September 2012 using a Taepodong (also called “Unha”) rocket, though the mission of the satellite is unknown. According to press accounts, the West condemned the launch as “provocative.” The North maintained it had the right to a civilian space program and said the new satellite would provide scientific data. North Korean people celebrated the launch (Associated Press in Pyongyang, 2012).⁴⁵⁷ North Korea’s new leader Kim Jong-Un, son of KJI, in an address to the people, spoke of the December 2012 satellite launch as having “conquered space” but also how such an accomplishment should inspire the people toward hard work in improving the economy (New Year Address Made by Kim Jong Un, 2013).⁴⁵⁸

The December 2012 space launch came from the Sohae Satellite Launching Station in northwest North Korea. North Korea began construction of the Sohae facility in 2001 and first used it in April 2012 to launch a Taepodong (also “Unha”) missile, also

⁴⁵⁶ North Korea reminds the South regularly that this is a technological area in which the ROK has failed.

⁴⁵⁷ Koreans were filled with “pride over the scientific advancement” and rushed into snowy Pyongyang streets and toasted the event at local pubs upon its announcement. North Korea may face yet another round of international sanctions as a result of the use of dual-use technology. Further, Iran, receiving its ballistic missile technology and assistance principally from North Korea, used the Nodong it received from North Korea to develop the longer-range Shahab-3 missile, and from this missile, a space launch vehicle (SLV) (Burns, 2010); pages 108-9. If Iran can do this with North Korean assistance, the prospects for continued North Korean ballistic missile and SLV technological improvement seem reasonably good.

⁴⁵⁸ The reference to the space achievement was mentioned multiple times in the leader’s speech.

an attempt to place a satellite into orbit; it failed. One significant change, and key advantage, is the ability to launch southward from Sohae and avoid overflying Japan and ROK. This is unlike North Korea's other site, the Tonghae Satellite Launching Ground near Musudan-ri, used to launch a Taepodong eastward over Japan in 1998 (Sohae Satellite Launching Station, 2012).⁴⁵⁹ Both the April and December 2012 launches from Sohae flew south.

The missile technology to conduct the North's space ventures are to be sure dual-use and can be used for the testing and development of long-range offensive ballistic missiles intended to carry warheads of comparable weight to a satellite. The threatening aspect of these launches has been the political position of Western nations where protests to the North's actions were carried out in the UN producing, for example, UNSC resolutions 1718 and 1874. More practical measures included strengthening the Proliferation Security Initiative (PSI) around North Korea intended to deny it meaningful trade in weapons with the outside world. PSI was an international partnership of information-sharing on North Korean missile and WMD proliferation activities and more robust activities including a greater naval presence in Northeast Asia and the actual boarding of ships by force (Cha V. , 2012).⁴⁶⁰ While some changes in pattern exist, North Korea continued Taepodong/Unha flights for what it called its space program.

Cyber

The use of computer networks to gather information, disrupt, or attack one's opponent has emerged in recent years, providing would-be users a capability to inflict pain in a variety of ways in distant territory and at high speed. According to General

⁴⁵⁹ Another advantage with the Sohae facility is the hindering of observation by foreign air and sea reconnaissance platforms.

⁴⁶⁰ Page 273. ROK joined the PSI in 2009.

James Thurman, North Korea's cyber warfare capability is a "significant" one and complements the 60,000 special operations troops, WMD, and ballistic missiles comprising North Korea's asymmetric warfare capabilities. He stated, "North Korea employs sophisticated computer hackers trained to launch cyber infiltration and cyber attacks." He also stated, "Such attacks are ideal for North Korea" because they can be done anonymously, and they "have been increasingly employed against a variety of targets including military, governmental, educational and commercial institutions" (Capaccio, 2012).⁴⁶¹ Further, according to U.S. Congressional testimony, North Korea was the likely source of a 2009 cyber attack on the U.S. and ROK involving "the malicious use of more than 100,000 computers" (SECURING THE MODERN ELECTRIC GRID FROM PHYSICAL AND CYBER ATTACKS, 2009).⁴⁶² More recently, North Korea allegedly used its cyber capabilities to attack a South Korean financial institution in April 2011 (Breen, Kim Jong-il: North Korea's Dear Leader, 2012).⁴⁶³ Still an emerging technology for North Korea, it provides its leadership another, though far less overt, means of political coercion.

Patterns of Behavior.

Three broad patterns are addressed below: technological advances; political provocation, often involving the military; and, proliferation of military technologies, particularly ballistic missiles. In terms of technology, as mentioned above, certain key aspects of the North's military have fallen into deep decline at the expense of advancements in nuclear and ballistic missiles. Generally, Korean pride in scientific accomplishment is strong. For example, it boasts it invented the world's first ironclad

⁴⁶¹ General Thurman was commander of U.S. forces in South Korea at the time.

⁴⁶² Page 114.

⁴⁶³ Pages xi-xii.

battleship in 1441 (Korean Overseas Information Service, 2003).⁴⁶⁴ Japan and the West have been surprised on occasion by North Korean technological advances, such as the Taepodong missile flight over Japan in 1998 that used multiple stages. New ballistic missile technologies that can threaten Japan and the West also include use of mobile missile launchers and a committed advancement toward an indigenous capability to place satellites into space. In addition to their military and political utility, ballistic missiles are particularly valuable to North Korea for their domestic value as a “symbol of scientific advancement” (Pinkston, 2008).⁴⁶⁵ Pinkston also points out that, from 1987-92, North Korea rapidly developed the Scud-C, Nodong, the Musudan, Taepodong-1, and the Taepodong-2 missiles. Though not without technical problems, Pinkston characterizes this technological pace as “remarkable and historically unprecedented for a small developing country” (Pinkston, 2008).⁴⁶⁶

North Korea has a long record of provocations that most agree were conducted at the direction or approval of either KIS or KJI. Earlier, political intimidation actions were part of the North’s strategy of confrontation and conducted to wreak havoc in South Korea and facilitate the needed conditions assumed for forcible reunification. These actions included: the unsuccessful 1968 commando raid on the South Korean Blue House to kill the ROK president; the 1983 commando attack in Rangoon which killed 17 ROK cabinet members and other officials but not the main target, the president; and, the 1987 bombing of KAL Flight 858 which killed 115. Both KJI and KIS were likely directly involved in the latter two attacks, but it was not known what role KJI played in the 1968 attack. North Korea has not reportedly conducted any state-sponsored terrorism since

⁴⁶⁴ Page 5.

⁴⁶⁵ Page 12.

⁴⁶⁶ Pages 16-7.

these events and was eventually removed from the U.S. official list of state sponsors of terrorism. Additionally, North Korea in this period seized the USS Pueblo in 1968, shot down a U.S. EC-121 reconnaissance aircraft in 1969, and murdered U.S. servicemen at Panmunjom in 1976 (Schneider & Post, 2002).⁴⁶⁷

North Korean violence toward ROK is markedly higher than toward others, reflecting a cultural hostility toward the political leadership of ROK for being “lackeys” of the U.S. and misleading the South Korean masses. North Korea views itself as the legitimate center of Korean culture and leadership of the Korean people. North Korean actions in recent years toward the South have been noticeably more provocative. According to the South Korean Ministry of National Defense (MND), these actions included: a naval engagement near Daecheong Island in November, 2009; the North’s torpedo attack on the ROK *Cheonan* on 26 March, 2010, killing all 46 ROK sailors; and, the North’s shelling with 170 artillery shells on 23 November, 2010, of a ROK Marine detachment on Yeonpyeong Island, killing four (including two nearby civilians) and wounding dozens of Marines and civilians (2010 Defense White Paper, 2010).⁴⁶⁸

North Korea selectively employs transparency of military capabilities or intentions (e.g., publically-announced and internationally-observed missile launches). For example, the 2009 and 2012 Taepodong missile launches were announced publicly and included providing specific information as to launch time windows and missile booster splashdown areas to the United Nations in advance. But these actions are rare. On the other hand, it denied sinking the *Cheonan* and other past aberrant behavior.

⁴⁶⁷ In Merrily Baird’s chapter, “Kim Chong-il’s Erratic Decision-Making and North Korea’s Strategic Culture.” Pages 125-8 and 130. North Korea deems deployment of military assets close to its border as provocative and has acted very aggressively against such assets. KJI supposedly oversaw the terrorist attacks in 1983 and 1987.

⁴⁶⁸ Page 25. The ROK responded to the artillery attack by launching several rockets back into North Korea.

In terms of external proliferation, North Korea has been a leader in exporting ballistic missiles, though this has tapered off in recent years. For example, U.S. and Spanish naval forces jointly intercepted a North Korean ship delivering Scud missiles and conventional warheads to Yemen in December 2003. The ship and cargo continued on, however, since the U.S. saw no immediate threat to it of the missiles and did not believe it had legal authority to take the cargo (Kerr, 2003).⁴⁶⁹ But the point was made to North Korean leadership: others are tracking your missile activities and can and will disrupt them.

Economic

The development, organization, and condition of North Korea's economy reflect the choices of its leaders including KJI. These choices of KJI were informed by the need to support the military as a top priority, use the military to coerce effectively, show himself and North Korea as formidable domestically (as part of the social contract) and abroad, and, to foster his personal image. The net effects have been severe stress upon the small economy, and North Korea's people, to fuel one of the world's largest military. But the importance of the North's economy is the broader national security and regional political context cannot be understated.⁴⁷⁰

Economically, North Korea in modern times has been a disaster. The ideologically and culturally driven need for military spending to shore up survival fears, yet compete with, if not dominate, regional peers like ROK and Japan, has led to

⁴⁶⁹ The U.S. was also reportedly working with Yemen at the time to win its agreement to cease purchasing North Korean missiles.

⁴⁷⁰ As early as the late 1990s, for example, a report sponsored by the Council on Foreign Relations on the prospects for peaceful political solutions in Northeast Asia concluded, "The Most important fact is the continuing deterioration of the North Korean economy" (Abramowitz & Laney, 1998); pages 9 and 11. The situation was reportedly including, at that time, discontent among elites and purging of economic officials.

underdevelopment of other sectors of the North Korean economy such as energy and industrial infrastructure and agricultural modernization. To be sure, years of flooding and drought, gross mismanagement, and loss of Soviet and Chinese economic support in the early 1990s, were all genuine complicating factors to choices made by North Korean leaders.⁴⁷¹ The results in North Korea were years of negative growth, unemployment, and crop failures. For example, North Korea imported nearly twice what it exported. Mass starvation occurred as well, killing as many as 2.5 million people, or 10% of North Korea's population. KJI departed somewhat from the old Stalinist model, authorizing for example a special economic zone (SEZ) near the Tumen River to try to garner foreign investment. On the whole, however, KJI continued his strategy of seeking high payoffs with minimal risk or costs (Schneider & Post, 2002).⁴⁷²

The economy of North Korea is divided into three main sectors: agriculture, mining, and industry; defense; and, an independent sector dubbed the "court economy."

⁴⁷¹ It is possible North Korea exaggerated the scale of its agricultural disasters in order to get more aid (Wolf & Akramov, 2005); page 11. This is based on a reference KJI made about exaggerations of African nations of their plights. The authors merely infer that if KJI overtly recognized they did it, he, too, may have done the same thing.

⁴⁷² In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Pages 118-20. North Korea was not always an economic basket case. For example, in 1970 its per capita exports were comparable to ROK's. By 1990, however, North Korea was in the lower quarter of the world's countries in exports, and by 2000 it was ranked near the bottom. This reflects an exceedingly sharp reversal and decline (Pollack, 2004); in Nicholas Eberstadt's chapter, "Why Hasn't the DPRK Collapsed?" Pages 155-6. The North Korean sense of comfort with its autarkical economic approach, according to Bruce Cumings, stems not only from its ancient past of invasions but also economic abuses from Japan during its colonial period. Cumings calls its self-reliant policy a "response to a prolonged twentieth-century crisis in their country," intended to maintain its historical insulation from connection to the outside world and the travails that come with it. North Korea, he argues, recognizes the need to change, highlighting comments made by a KIS relative that the North's economy should follow Singapore's model of free enterprise with strong central control (Cumings, 2005); pages 407, 430, and 436-7. Emphasis upon heavy industry was a Communist emphasis as well but really had its roots with Japanese industrial development in the prewar period. The period of the early 1990s in North Korea was catastrophic. According to Eberstadt, the severe food shortage stemming from years of flooding and drought was "the first and only mass famine ever to befall a literate and urbanized society during peacetime" (Eberstadt, *Policy and Economic Performance in Divided Korea during the Cold War Era: 1945-91*, 2010); page 2. According to one estimate, the entire food shortage in North Korea could be remedied by new policy reflecting a 5% reduction in its \$2 billion defense budget (French, 2007); pages 229-30.

The court economy is an exclusive chain of goods and services for members of the nation's political, military, and technical elite class, with access to state resources but without transparent accounting. As many as three million people have access to the transparent court economy, a process used primarily to buy control of the entire state in exchange for loyalty from its recipients (Wolf & Akramov, 2005).⁴⁷³ On the other hand, with the state-run markets remaining entrenched, it is clear a black market has emerged in North Korea in response to inefficiencies in the socialist system to meet basic survival needs of its people (Connor, 2009).⁴⁷⁴

To support its industry, economy, and population, North Korea has stressed avoidance of dependence on petroleum and development of its electrical energy capacity. This has involved the use of some hydroelectric plants and those powered by coal; the former were expensive to build, and more attention was given to coal-based plants, owing also to the abundance of coal in North Korea and accommodating its *juche* self-reliant ideology. Nevertheless, coal mining technology has been limited in North Korea, driving it to nuclear power as a source of electricity and the building of facilities at Yongbyon and Taechon. Reactors, however, were capable of both high electricity output but also production of plutonium for the construction of nuclear weapons. The 1994 Agreed Framework with the U.S. and others was intended to replace the existing North Korean reactors with non-threatening light-water reactors; the political process broke down

⁴⁷³ Pages 12-3 and 18. At least some, perhaps \$1 billion annually, of this court economy is fueled by legally forbidden international dealings in drugs, counterfeiting, and missile and WMD technologies with Pakistan, Iran, and others. The attraction by China in modern days of North Korean minerals is not a new phenomenon, however. During the Japanese colonial period significant extraction occurred for use by Japan. In 1944, for example, by far the greater mineral extraction and production took place in the North, whereas non-mineral production was much higher in the South during the same period (McCune, 1950); see Tables 4 and 5, pages 57-8. Over 25 specific minerals are listed.

⁴⁷⁴ Page 191. As a result, Connor argues it is not likely a middle class will emerge as others suggest.

before much progress was ever made (Connor, 2009).⁴⁷⁵ So, while development and possession of nuclear weapons clearly suited North Korean security needs as part of its post-Cold War strategy, North Korea was also driven to nuclear power (the industrial foundation for nuclear weapons) owing to its domestic energy needs and technical limitations with coal, for example.

One of the casualties of North Korea's overemphasis upon a culture of continuous revolution, centralized state planning, and *juche* ideology of self-reliance is the "stagnation of knowledge" and its consequences on the economy including, for example, technology and agriculture (Kim S. C., 2006).⁴⁷⁶ By the late 1990s, KJI was searching for technology to become the "key link" for the nation's economy, the same notion his father had 25 years earlier. By the 2000s, the *Zainichi* community (Koreans living in Japan) had indeed grown to become a major source of technology, and North Korea had increased its skills in computer software engineering and development, including fingerprint and voice recognition technologies. But years of neglect, compounded by international (including Japanese) sanctions on technologies with potential military applications, have left North Korea behind.

Despite having a large military, the economy of the North is very small. North Korean Gross Domestic Product (GDP) has been anemic since 1990 and the end of the

⁴⁷⁵ Pages 134-6.

⁴⁷⁶ Pages 180-90. Kim argues the development of North Korea's intellectual class began erosion in the 1970s and, in parallel with the expansion of *juche* by KJI, the North also experienced a decline in academic skill, research, theoretic inquiry, professorship, and technological improvement. Kim Il-Sung complained about the lack of a burgeoning scientific base for socialism, including basic skills in agriculture and fertilizers (a plaguing problem), and in the 1980s looked to the *Zainichi* community to expand its role in providing the rapid foreign technology back to the "fatherland," especially in the areas of precision machinery and electronics. At home, increasing numbers of intellectuals instead were directed to activities supporting ideological education—the decay continued.

Cold War period, essentially experiencing no real growth (Wolf & Akramov, 2005).⁴⁷⁷

By the year 2000, its GDP was a mere \$22 billion, compared to \$765 billion in ROK (Schneider & Post, 2002).⁴⁷⁸ This disparity has continued, with others estimating the (GDP) of South Korea to be 40-50 times higher than North Korea's (comparable to the 2000 estimate), though this is difficult to estimate. Most agree, however, the military sector of North Korea's economy accounts for much of the total North Korean investment, possibly 25-30% of GDP or more (Wolf & Akramov, 2005).⁴⁷⁹

North Korea's KJI faced a stagnant GDP since the late 1980s, complicated by trade deficits, loss of Communist support, floods and drought, and then sanctioning penalties for aberrant behavior. These pressures, atop a "military first policy" of continued defense spending, drove the North to new sources of revenue, illegal activity, and reluctant reception of foreign aid. Arms sales, including decades of North Korean leadership as the world's top seller of missiles, accounted for much of the external funding. Missile sales alone accounted for \$500 million annually, with ballistic missiles being sold to Iran, Syria, Libya, Pakistan, Yemen, Vietnam, Egypt, Iraq, and Ukraine (Wallace, 2007).⁴⁸⁰ North Korea maintained in the mid-1990s that sales of ballistic missiles and their components and related technologies provided it with significant revenue and balked, even under threat of economic sanctions, at U.S. requests to curtail such transactions. Smacking of political extortion, in July 2000 North Korea demanded

⁴⁷⁷ Page 12.

⁴⁷⁸ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Pages 118-20.

⁴⁷⁹ Pages 10 and 13. Despite an anemic start in the postwar period, the ROK economy has grown rapidly in recent years towering in comparison to the North's. South Korean General Paik, following the Korean War, explained how the ROK economy began to surge in the 1960s in large part due to the role former military personnel, full of leadership and management experience from the war, played in the economic sector (Paik, 2000); page 253.

⁴⁸⁰ Pages 22-31. While foreign sales have fallen off in past years, the North can still produce, for example, 4-8 Scud missiles per month.

\$1 billion in annual compensation for ending foreign missile sales and also stated the need for others to launch its satellites if it were to cease developing long-range missiles (Burns, 2010).⁴⁸¹

The strong need for revenue and economic aid to sustain the North Korean regime was a powerful motivation for the use of ballistic missile tests or similar forms of coercion. The alternative might have been radical internal economic reform efforts, but these were problematic for KJI's calculus. On the one hand, reforms could undermine his control over the people. On the other hand, adverse effects of reform could trigger violent challenges to the regime. The top priority was the security of KJI and his regime—but economic reforms seemed risky, at least compared to missile-based coercion. This is would be the expected strategy for North Korea given their internal conditions and view of others, including Japan. Alternatively, political engagement with Japan, for example, and the economic benefits involved with that course of action, may involve an opening up that could lead to external exploitation—an historical path that, especially given its history with Japan, also appeared difficult for North Korea (Pollack, 2004).⁴⁸² North Korean interaction with Japan did include coercion; however, periods of interaction discussing political rapprochement also occurred. Despite great economic disparities, North Korea did not escalate to patterns of violence with Japan even when rapprochement negotiations failed.

Journalist and consultant Michael Breen claims the private arm of KJI's regime funding was through an enterprise of the Korean Workers' Party called Division 39. Formed as early as the mid-1970s, this organization had two functional arms: legitimate

⁴⁸¹ Page 97-8.

⁴⁸² In Narushige Michishita's chapter, "North Korea's Military-Diplomatic Campaign Strategies: Continuity versus Change." Pages 74-5.

business through the Daesong Group and its Daesong Bank and Golden Star Bank in Vienna; and, arms dealing and illegal activities. Legitimate efforts and trade were done by North Korean officials who trained and studied abroad and included such things as exportation of ginseng, seafood, and minerals including gold, silver, and magnesium. Illegal work included counterfeiting and drug dealing including sale of heroin and methamphetamines to Japan, South Korea, Russia, China, and Taiwan (Breen, Kim Jong-Il: *North Korea's Dear Leader*, 2004).⁴⁸³ Buying loyalty in this way is arguably akin to pursuing regime survival from within (Wallace, 2007).⁴⁸⁴

The ROK government could also be a source of significant financial resources for North Korea. According to Marcus Noland, some in South Korea considered “reconciliation transfers” to North Korea as a means of creating peninsular stability. Such transfers would have amounted to 1% of the ROK’s GDP, or billions of dollars per year as “survival rations” for KJI and his regime (Pollack, 2004).⁴⁸⁵ However, the economic arrangements in North Korea are so divergent from the South’s, in terms of markets, military expenditures, and industry, that the potential costs for reunification could exceed \$600 billion (Wolf & Akramov, 2005).⁴⁸⁶

Social Well-Being and Unrest

Other than the suffering experienced during the 1990s and consequences of domestic economic policy reflected by people leaving or defecting, the exact status of the

⁴⁸³ Pages 166-8. Breen cites as examples the Australian military seizure of 125 kilograms of heroin aboard the Pong Su at sea in April 2003 and the 1994 arrest of Daesong officials in Macao with \$250,000 in counterfeit money. He also suggests the \$450 million from Hyundai in 2000 ahead of the summit between North and South Korean leaders likely went to Division 39 for use within the regime.

⁴⁸⁴ Page 1. Wallace adds that overt activities included sales of military equipment and technology, direct remittances from Koreans living abroad, diversion of incoming foreign aid, and regular trade and banking practices.

⁴⁸⁵ In his chapter, “Korea’s Economic Dynamics: Scenarios and Implications.” Page 137.

⁴⁸⁶ Page 59.

well-being of the people or their sentiments toward their leaders is difficult to know with precision or confidence. However, from the analyses of others, it appears there is no means of non-violent political redress; political prisoner camps exist and executions and repatriation occur; people take risks to leave the country or acquire ROK or Western goods; there is a general lack of fertilizer and electricity; and, there have been famines, disease, drought, and starvation. Despite, or perhaps because of, this situation there has not existed any significant civil strife, organized resistance, or insurrection against the KJI regime. There was, however, a short period of small public protests over currency reform in November and December, 2009 (BBC, 2013).⁴⁸⁷

After the Korean War, KIS reordered society into a new hierarchy that echoed Confucian and ancient Choson dynasty ideas. He identified three classes that not only reflected his view of socialism but, more importantly, his remedy for the recent past. These classes included: the core class; the wavering class; and, the hostile class. Everyone was investigated thoroughly and placed into a class based upon loyalty to the Kim regime as well as family connections. The core class includes regime and elite family members, KWP members, and high-ranking officials. It also includes family members of soldiers killed in the Korean War and those who were anti-Japanese before the end of WWII. The wavering class includes families with connections in South Korea or whose families were merchants and farmers before the end of WWII. Members of this class might be won over through political education, but are far removed from the opportunities of the core class. The hostile class includes families of those who have been critical of the Kim regime or whose families were wealthy or religious before the end of

⁴⁸⁷ See the section entitled, "Tensions subside." See also Cha (2012); pages 156-8.

WWII. Members of the hostile class live in rural North Korea as outcasts and doomed to poverty or a concentration camp (Connor, 2009).⁴⁸⁸

The overall picture of civil liberties inside North Korea is neither good nor surprising. According to Freedom House, North Korea receives the worst rating for freedom (7.0), based upon a wide variety of factors, including: lack of open elections; endemic government corruption; state control of the media; no real freedom of religion, movement, or assembly; lack of an independent judiciary; social discrimination based upon designated classes; human trafficking; and forced abortions and infanticide (Freedom in the World 2012: North Korea, 2012).⁴⁸⁹ According to Walter Sharp, North Korea was ranked in the bottom eight countries by Freedom House for internal protection of political rights and civil liberties, as well as one of the most repressive regimes in the world (Sharp, 2008).⁴⁹⁰ This situation, while theoretically part of a social contract, clearly reflects the goal of maintaining the Kim family regime in power through totalitarian control. The masses generally seem to reluctantly accept the social order, though there is no evidence of mass happiness for it.

Years of control, however, have left North Korea's leaders in a predicament. Generally, Scobell argues North Korea probably subscribes to some blend of the following strategic intentions: (1) merely survive as a regime; (2) become a strong and vibrant state; and, (3) reunify the peninsula on its terms. Its leaders are likely more

⁴⁸⁸ Pages 189-91.

⁴⁸⁹ In the section "Political Rights and Civil Liberties."

⁴⁹⁰ Pages 13 and 149. Control of the people also means pervasive law enforcement and incarceration camps. Lintner cites a 1998 South Korea and a 2003 U.S. report claiming as many as 200,000 inmates exist in North Korean prison camps, sent there (and some are tortured) due to political crimes such as reading foreign newspapers, listening to foreign broadcasts, or unauthorized travel to China or Russia. Some were arrested for disco dancing at a bar in Pyongyang (an activity allowed by foreigners, not North Koreans) and complaining certain goods were not available in the Cheil Department Store in Pyongyang (Lintner, 2005); pages 176-7.

confident in their position than fatalistically thinking the regime is doomed or that survival is all it can expect to achieve. However, one of the greatest challenges facing North Korea is its internal “dilemma” that impacts other strategic goals: the fear among its leaders that domestic reforms will undermine their positions of control, but without it, regime failure also appears on the horizon. The fear of the regime not surviving due to reforms is higher, according to Scobell, leading its leaders to gamble on modest changes to the status quo (Scobell, *North Korea's Strategic Intentions*, 2005).⁴⁹¹

KJI reportedly stated recently, “I will do everything to let our people live a content life by improving their lives in the shortest period possible” (Pollack, *No Exit: North Korea, Nuclear Weapons and International Security*, 2011).⁴⁹² However, some suggest KJI had no remorse for the suffering of North Korean people in the 1990s at the height of their suffering, at times depriving them of internal and international aid. He demonstrated willingness for brutality, such as during famines in 1997 and 1999 the ordering of hundreds of thousands of people into camps where few could survive and the killing of the babies of political prisoners (Schneider & Post, 2002).⁴⁹³ Others have described the plight of the North Korean people as more than a policy failure and nothing less than a neglect of their government, or perhaps as an instrumental abuse. The choice of KJI was to continue a “military first” program at the expense of his people, 80% of whom lived beyond the reach of the Party or military distribution networks. The result

⁴⁹¹ Pages v-vii.

⁴⁹² Page 178. From an article in *Rodong Sinmun*. This was actually a realization that the policy goals of KIS remained unmet.

⁴⁹³ In Merrily Baird’s chapter, “Kim Chong-il’s Erratic Decision-Making and North Korea’s Strategic Culture.” Pages 113-4.

was chronic undernourishment of the people and increased reliance upon the international community for food (Buzo, *The Making of Modern Korea*, 2007).⁴⁹⁴

External Environmental Factors

This section reviews the key external relationships of North Korea and the diplomatic style employed by KJI in these relationships. This not only provides insights into KJI's priorities but helps better understand the political context in which Japan interacted with North Korea and how its BMD program fits within that context. The U.S. Ballistic Missile Defense Review (BMDR) report in 2010 provided broad linkages for missile defenses to national security and deterrence. According to the report, the top priority is near-term regional threats, including North Korea, which seek to exploit ballistic missiles and WMD capabilities not only for operational purposes in conflict but to “undergird efforts to coerce” others, including those near to them, in times of relative peace (Ballistic Missile Defense Review Report, 2010).⁴⁹⁵ Political coercion is the strategy pursued by North Korea in its relations and diplomacy and the “peacetime” scenario is the setting in which the dissertation explores.

Diplomacy and Communication

Snyder suggests those who have had high-level interactions with North Koreans claim a “crisis diplomacy” style, given the position of North Korea in the post-Cold War era. This crisis orientation came across regularly, such as in discussions on the nuclear

⁴⁹⁴ Page 183. Only 12% of the population belongs to the Party, for example (Robinson, 2007); page 148. For example, Buzo cites the military advancements of the North Korean regime in the past 20 years, particularly its continued advancement of ballistic missile and nuclear weapons technologies, even during North Korea's worst period of domestic plight: the food crisis and starvation of large numbers of people.

⁴⁹⁵ Page iii.

issue (Snyder, 1999).⁴⁹⁶ An alternative description—and one with wide currency—is a style of coercion or extortion. According to Narushige Michishita, North Korean broad political objectives had not changed much in recent years and, therefore, its military and diplomatic patterns of behavior, as it sought to relate to Japan, ROK, and the U.S., would remain essentially consistent. Since the 1990s, North Korean objectives have been dominated by diplomatic coercion activities more than military confrontation. This change from military confrontation to missile-backed diplomatic coercion was supported by a larger share of resources going into ballistic missile development and WMD (Pollack, 2004).⁴⁹⁷

Becker argues, despite all the domestic strife and external environmental changes, there has been “no change of heart” for the North Korean regime. It continues to engage in various activities, such as interaction with NGOs, cultural events, or searching for Korean War era missing-in-action (MIA) remains. However, all these engagements were purchased with some sort of payoff. The only change for North Korea, according to Becker, is the lethality of military weapons the North acquires to facilitate its extortion of others (Becker, 2005).⁴⁹⁸ As seen with the 1998 Taepodong launch, even a test flight can

⁴⁹⁶ Page 69. It was, however, difficult to discern whether it was instinctive, strategic, or unwitting behavior on the part of the North Koreans. North Korea chose to employ different approaches of diplomacy in the early 1990s according to Yong-Sup Han. Han states the North dealt with South Korea as “bargaining between equals,” while it played itself as a weaker state and used “brinkmanship” with the U.S. to improve its position (Han, 2000); page 49.

⁴⁹⁷ In Narushige Michishita’s chapter, “North Korea’s Military-Diplomatic Campaign Strategies: Continuity versus Change.” Pages 59-62. Roberts argued the approach of exploiting the potential use of force in some way in crisis is the essence of coercion. It does not matter, in such a scenario whether the use, or threatened use, of force is “efficient” in its application. It is there simply as an instrument in which to negotiate a bargain favorable to the one coercing (Roberts, 1988); page 256.

⁴⁹⁸ Page 265. Not all diplomatic interaction can be characterized as coercion, however. For example, important activities have included sustained cultural and economic cooperation with China and Russia (Schneider & Post, 2002); in Merrily Baird’s chapter, “Kim Chong-il’s Erratic Decision-Making and North Korea’s Strategic Culture.” Pages 121-2.

have profound effects upon the domestic psyche and significant security-related consequences in states like Japan and the United States.

Relations and Interactions with Others

General.

Kiyosaki portrays North Korea in the 1970s as politically frustrated with the entire notion of reunification or breaking out entirely as an independent, if not predominant, player in Northeast Asian geopolitical affairs. This frustration was due to four impediments: (1) a period of superpower détente; (2) disunity between China and the Soviet Union; (3) the presence of U.S. forces and, more importantly, U.S. tactical nuclear weapons, in South Korea; and, (4) a more unified ROK army and society (Kiyosaki, 1976).⁴⁹⁹ Kim Il-Sung feared being sidelined. By the early 1990s, with the end of Soviet Communism, international fear increased over North Korea as circumstances were considered “volatile” (Hall & Kemp, 1994).⁵⁰⁰ Some described the problem as North Korea’s “daunting” challenge to cope with others (Kim S. S., North Korean Foreign Relations in the Post-Cold War Era, 1998).⁵⁰¹ However, as time would reveal, external actors, too, struggled with a way to deal with North Korea in the post-Cold War world.

The very real challenges North Korea faced internally and externally also lend themselves to theoretic international relations approaches (described by Samuel Kim in the next paragraph). For example, according to Stephen Walt and Dougherty and Pfaltzgraff, realism attempts to explain the problems in the world through acceptance of state-level propensities toward conflict. This view suggests leaders are, therefore, worried over survival, security, and self-help measures, driving them to acquire more and new

⁴⁹⁹ Page 112.

⁵⁰⁰ Page 3.

⁵⁰¹ Page 3.

measures of power. Though a common view, realism offers little aid in predicting international change. Liberalism emphasizes remedies or mitigation to conflict through democracy, interdependence, and cooperative institutions. It perhaps underestimates the importance of power to state leaders and also does not predict significant changes well, such as the end of the Cold War. Finally, modern constructivism explores social factors such as a nation's identity and culture in order to understand and explain state behavior. Walt suggests these theories actually complement one another, while Dougherty and Pfaltzgraff describe modern theory as more of a synthesis of multiple theories (Dougherty & Pfaltzgraff, 2001).⁵⁰²

By the early 2000s, it seemed to outsiders that North Korea was simply coping to survive, having endured the death and devastation of floods and drought in the late 1990s. It could not even provide electricity for lighting at night, except in Pyongyang. Survival, however, could last no further than 2015 according to intelligence estimates. To Samuel Kim, realists simply framed North Korea's situation in broader balance of power realities: U.S. hegemonic retreat; Russian decline; Japanese stagnation; and the rise of China as clear regional hegemon. Liberals relied on regional institutions—such as the Association of Southeast Asian Nations (ASEAN), Korean Peninsula Energy Development Organization (KEDO), and Tumen River Area Development Programme (TRADP)—for solutions, which usually disappointed. Constructivism offered aid in understanding, through study of the disparate cultures and identities of the various actors with a stake in the Northeast Asia region. But this, too, he argued, while showing distrust

⁵⁰² Walt is quoted in Dougherty & Pfaltzgraff, pages 6-7. Dougherty and Pfaltzgraff add to Walt's descriptions on pages 6-7, 32-3, and 49. Older, "radical" traditions of constructivism included Marxist and Leninist theory that placed the emphasis upon purposely transforming the conditions affecting international relations, not simply understanding them; page 6.

of each for understandable historical reasons, did not offer security-related solutions for the region in general or North Korea specifically (Kim & Lee, North Korea and Northeast Asia, 2002).⁵⁰³

Despite the presence of great powers, North Korea likely embraces more of a regional perspective in its security and foreign policies. This is due to the centuries of security-related interaction with close regional actors like Japan, China and, more recently, South Korea.⁵⁰⁴ Further, in conjunction with its change in strategy from confrontation to coercion at the end of the Cold War, North Korea may also see the role or impact of the U.S. in Korean affairs as much reduced. For example, according to Michael Mazarr and James Goodby, one of the key characteristics of the new international security environment is a “United States politically exhausted and fiscally

⁵⁰³ Pages 3 and 7-23. Samuel Kim referred to a somewhat famous satellite photo of nighttime on the peninsula with the ROK ablaze in light and only Pyongyang alit in the North. What was even worse, study of foreign policy among major powers revealed political leaders were making significant security policy changes without even trying constructivist assessment of the identity or culture of others. The notion of not surviving as a state past 2015 is contrary to others, such as Andrew Scobell, who envisions more of a Cuba-style model of reforms, regime survival, and an otherwise “soft landing” (Scobell, *Projecting Pyongyang: The Future of North Korea's Kim Jong Il Regime*, 2008); pages 24-5.

⁵⁰⁴ Many U.S. analysts approach North Korea from a U.S. perspective, presuming the North's primary interests, capabilities, decisions, behavior, and relations are centered upon the United States. One of the historical lessons from the recent war with Iraq can offer caution with this approach, however. The U.S. presumed Saddam's decision-making on pursuit, maintenance, and potential use of WMD centered on the U.S., but in an extensive research and analysis of Saddam, his background, regional history, and his strategic intent, the U.S. concluded after the 2003 war with Iraq that U.S. analysis had been wrong prior to the war (DCI Special Advisor Report on Iraq's WMD, 2004). See Volume I of the report, including Regime Strategic Intent. See especially page 1 and 34. DCI stands for Director of Central Intelligence. Much bluster was made over the U.S. but his decisions with the U.S. and his possession of WMD were intended to deter the U.S., whereas achieving deterrence with the U.S. would allow him to focus upon regional actors which he deemed of far greater importance to his country in the long-term. Regional actors not only were central in Saddam's calculus, they also invoked emotive reactions to him given historical interactions; his central fear was appearing weak to regional actors like Iran. Given North Korea's long history of cooperative and conflictual interaction with regional actors, it, too, likely uses the U.S.-centered activities to improve its position vis-à-vis regional actors including ROK, Japan, China, and Russia. Further, using a game-theoretic framework, Michael Simon also argues regional actors are focused primarily on regional issues or other regional actors in their strategic calculations (Simon, 2002); pages 271 and 289.

and militarily broke” (Shultz, Drell, & Goodby, 2011).⁵⁰⁵ If so, North Korea and Japan may both sense less U.S. credibility to deter or manage North Korean aberrant behavior. As a result, North Korea has been more provocative, and Japan proactive in its own national defense including acquisition of a BMD program. North Korea may also be more willing to pursue or accept political bargains with regional actors such as Japan.

Generally, North Korean leadership has not related well politically with its opponents. It has difficulty, for example, interpreting their intentions, due in part to greater (though not “total”) reliance upon conflictual over cooperative means. It is also highly sensitive to perceptions of external interference in its domestic affairs (Schneider & Post, 2002).⁵⁰⁶ One example could be the way Russia chose to abandon North Korea when the Cold War ended in which Russia sided economically and politically instead with ROK. Another example would be the sense of suspicion of Japan given the Japanese occupation of Korea, perhaps inhibiting more positive political relations when those seem to have been possible.

North Korea’s coercion strategy to seek economic accommodation or political and security objectives relies in large part upon use of ballistic missiles. Doing so seems to have cost North Korea little, or little in terms of what matters to North Korea. Sanctions were not of significant effect on its ballistic missile programs, at least in the sense North

⁵⁰⁵ In Chapter 2 entitled, “Redefining the Role of Deterrence.” Page 56.

⁵⁰⁶ In Merrily Baird’s chapter, “Kim Chong-il’s Erratic Decision-Making and North Korea’s Strategic Culture.” Page 132. In the past several years, with the exception of China, most regional actors, including the U.S., have been merely holding meetings and discussions about, not with, North Korea (Pollack, Korea: The East Asian Pivot, 2004); page 177. This may be due to frustration among the parties with each other, or it may reflect frustration in a search for new solutions. These perceptions could also be described as political paranoia (Robins & Post, 1997); pages 65-7. According to Robins and Post, paranoid cultures tend to reflect paranoid behavior. They describe paranoid leaders, such as North Korea’s KIS and KJI, as politically paranoid externally within the community of nations, aware of those on the outside who have treated them in bad faith. Leaders of such states as North Korea believe relations with others have been marked with suspicion, deception, and betrayal, principally with opponents but with allies as well.

Korea did not conduct extensive ballistic missile testing to achieve operational training and technical data needed as part of most Western quality assurance programs for deployed systems. Missile production capabilities are also sustainable in North Korea. However, economic losses incurred if North Korea needed modifications to its missiles to counter defenses would be detrimental to sustained use of ballistic missiles to coerce. On the other hand, North Korea has also employed cooperative tools on occasion, such as KJI agreeing in 2000 to a moratorium on missile testing, reflecting a more cooperative element in his approach (Schneider & Post, 2002).⁵⁰⁷

Relations with Regional Actors.

United States

The North Korean psyche of defending the land from invader certainly precedes Japan's imperialist conquest or North Korean complaints of U.S. occupation of South Korea. There is, however, an interesting twist on the connection to the U.S. in the family lineage of North Korea's modern leaders that dates back to 1866. In that year, Korea sank the *USS General Sherman* in the Taedong River near Pyongyang in a dramatic response to U.S. attempts to pressure Korea into trade relations (i.e., "gunboat diplomacy"). The leader of the Korean troops who defeated the invaders was reportedly Kim Il-Sung's great-grandfather (Snyder, 1999).⁵⁰⁸

⁵⁰⁷ In Merrily Baird's chapter, "Kim Chong-il's Erratic Decision-Making and North Korea's Strategic Culture." Pages 128-9.

⁵⁰⁸ Pages 18-9. A monument to KIS's great-grandfather and his bravery exists at the site along the river. In a personal anecdote, historian John Parsons retells of Korean pride and an anti-American "undercurrent" during a 1983 visit to the war memorial at the fortress on Kanghwa Do, a South Korean island in the Han River near Seoul and adjacent to North Korea. In 1868, after the *Sherman* incident, the U.S. killed nearly 400 Koreans and took control of the fortress on Kanghwa Do when the U.S. military returned with Marines and overwhelming firepower. To the Koreans, the site was the equivalent of the Alamo and a reminder that all Koreans, not just North Koreans, share a common history of foreign—and U.S.—intervention (Parsons, 2011); page 126.

Beyond resilient, Samuel Kim suggests North Korea's sovereignty today is more secure than ever through use of its nuclear weapons capability. These capabilities undergird a North Korean nuclear brinkmanship style of relations with regional actors, playing its "collapse card" as needed to get attention. The U.S. response has generally been a hardline one, with Japan supporting the U.S. more than China, Russia, or South Korea (Kim S. S., *North Korean Foreign Relations in the Post-Cold War World*, 2007).⁵⁰⁹ With uncertain aid from China and Russia, and improved ties between China and South Korea, Kim also argues the North has found itself needing to work with the U.S.; however, since the end of the Cold War, the U.S. has principally chosen coercive, not positive instruments of interaction to resolve problems, making the vision of U.S.-North Korea normalization a distant one (Kim S. S., *North Korean Foreign Relations in the Post-Cold War World*, 2007).⁵¹⁰

Republic of Korea

While the Korean War is technically still unsettled and in a state of ceasefire, North Korea, through its constitution, continues to call for the overthrow of South Korea and the unification of the Korean peninsula. However, large-scale land invasion as part of North Korea's former strategy of armed confrontation seems unlikely, having moved more toward a strategy of political coercion, including pressures to provide various forms

⁵⁰⁹ Pages vi-viii.

⁵¹⁰ Pages 54-5. Further, North Korea's relations with the U.S. seemed to go from bad to worse in the 2000s, including: in 2002, the North told U.S. diplomats it was actively processing uranium into weapons-usable form; North Korea expelled inspectors from the IAEA; North Korea withdrew from the NPT (the first state to withdraw); and, the U.S. ended the Agreed Framework with North Korea, ending fuel aid (Robinson, 2007); page 186. Robinson suggests the North Korean stance against the U.S. at the time was due to the domestic political change in the U.S. (from Clinton to Bush) and with it a stark change in U.S. policy. For example, the U.S. government increased its rhetoric against North Korea, including it in an "axis of evil;" the U.S. was attacked on 9/11 and subsequently invaded both Afghanistan and Iraq; and the U.S., led by conservatives, chose to abandon Clinton-era engagement tactics with North Korea in favor of isolation policies. Page 186.

of aid and assistance. Violence and hostility toward the South have risen in the past few years, in part due to a resumption of tough-line policies in the South, but giving terrible reminders of past North Korean behavior toward the South: a ROK frigate was sunk, allegedly by North Korea, in 2010, killing 46 sailors; in 2010, North Korea shelled a ROK island with artillery, killing four people; and, a computer-based cyber attack, blamed on North Korea, caused a South Korean financial institution to crash in April 2011 (Breen, Kim Jong-il: North Korea's Dear Leader, 2012).⁵¹¹

In the past several years, South Korean policy has alternated between a tougher line and accommodation, generally in line with whatever political party is in power. For example, Key-young Son suggests ROK's Sunshine Policy, during a 10-year period of accommodation, was aimed at alleviating the North's internal security dilemmas with aid—internal issues which ROK believed drove KJI to provocative behavior outside the bounds of international norms (Son, 2006).⁵¹² A common criticism was such aid was diverted to North Korea's military, creating a tradeoff of more moderate North Korean behavior at the expense of helping their military.

Russia

⁵¹¹ Pages xi-xii. While the full extent of North Korea's cyber attack capabilities is not well understood, they may represent an asymmetric capability to coerce or threaten others. Japan, for example, recognizes the risks of cyber attack and, while not mentioning North Korea by name, has emphasized a "comprehensive" approach to the role of cyber capabilities within the Self-Defense Forces (NATIONAL DEFENSE PROGRAM GUIDELINES for FY 2011 and beyond, 2010); pages 3 and 5.

⁵¹² Pages 81-2, 107, 111-5, and 182-3. One way it did so was through use of private funding from Hyundai of \$450 million to North Korea just prior to a summit of Korean leaders in 2000—interpreted by many as simply a bribe for North Korean demands for cash before any summit could occur. The summit helped South Korea's president win the Nobel Peace Prize that year, but revelations later of the secret Hyundai "buy-out" and reports the money funded military projects in the North created political problems for South Korea's political leadership. Son characterizes the Hyundai money as a "bribe." Moderating North Korea's need to act provocatively by disincentivizing its need for currency could be considered a deterrent action to reduce KJI's "costs of restraint."

To KIS, the Soviet role in WWII on the Korean Peninsula was another “invasion” that, while it liberated North Koreans, was nevertheless a breach of Korean sovereignty (Szalontai, 2005).⁵¹³ This was part of what led KIS to mistrust the Soviet Union from the beginning. With the end of the Korean War, and the death of Joseph Stalin, disagreements between the two began to rise. Soviet de-Stalinization and other structural reform led North Korea’s leaders to greater autonomy from the Soviet Union and the North Korean branding of its own ideology, different from Soviet, Chinese, or European Communism—a style that would actually lead it the other direction, toward a stronger, not weaker, personality cult in North Korea (Szalontai, 2005).⁵¹⁴

Since the end of the Cold War, the relationship between the two states has reflected periods of cooperation, but the severe drop in assistance from the Soviet Union at the end of the Cold War has kept the relationship less than ideal for North Korea. KJI, for example, traveled to Russia as part of this relationship, but never achieved Russia’s forgiveness of the multi-billion dollar North Korean debt. There has also been interaction regarding military capabilities, such as Russian scientific and technical assistance in North Korea with its ballistic missile program and, perhaps, development of EMP capabilities with its missiles. Other important activities have included reinvigorating economic ties with Russia. For example, North Korea signed a Defense Industry Cooperation Agreement with Russia in April 2001 to build a rail line through North Korea, linking Russia to ROK, potentially bringing much needed revenue to North Korea as a result (Schneider & Post, 2002).⁵¹⁵

⁵¹³ Page 13.

⁵¹⁴ Pages 35, 39, and 45. North Korean autonomy also included purges of threats to its new thinking.

⁵¹⁵ In Merrily Baird’s chapter, “Kim Chong-il’s Erratic Decision-Making and North Korea’s Strategic Culture.” Pages 121-2.

China

North Korea's relationship with China changed when the Cold War ended along with Soviet aid. The problem was that China (and Russia) both acted quickly to establish relations with South Korea, frustrating North Korean regional policy. For China, the relationship with both Koreas gave it a unique opportunity to help shape the situation to its favor; however, since the first nuclear crisis in the 1990s, China's primary goal has been to foster stability in Northeast Asia through avoiding North Korean collapse and border consequences that could follow (Snyder, *China's Rise and the Two Koreas: Politics, Economics, Security*, 2009).⁵¹⁶ According to Snyder, China is North Korea's major source of exchange, providing approximately 40% of all North Korean trade including grain, petroleum, and coal. However, whether through aid in the post-flooding situation in the 1990s or the Six-Party talks to deal with the North Korean nuclear issue, China's response was begrudging and modest (Snyder, *China's Rise and the Two Koreas: Politics, Economics, Security*, 2009).⁵¹⁷ Only China retained consistent and "meaningful" ties with North Korea, though China's influence over KJI was likely limited (Pollack, *No Exit: North Korea, Nuclear Weapons and International Security*, 2011).⁵¹⁸ China did, however, pursue recurring high-level ties with North Korea including direct contact with

⁵¹⁶ Pages 109-10, 115, and 118. Chinese leaders supposedly promised KIS at some point China would "promote the normalization of North Korea's relations with Japan and the United States" (page 110). This may be part of their rationale for taking a leadership role in the Six-Party talks.

⁵¹⁷ Pages 111-4. For example, China negotiated differences in prices over millions of dollars in aid or trade—an arguably petty position given China and North Korea's relative economic positions. This 40% estimate could be higher since some Chinese trade likely goes unrecorded through military-to-military ties and cross-border and provincial business relationships. Actual statistics of China's trade is "classified" material held by the Chinese government; the material provided by Snyder is from UN, Chinese, South Korean, and other available sources.

⁵¹⁸ Page 186.

KJI since 2003 (Snyder, *China's Rise and the Two Koreas: Politics, Economics, Security, 2009*).⁵¹⁹

Relations with Japan Revisited.

Many of the essential factors involving the relationship between North Korea and Japan have already been addressed or mentioned elsewhere in the dissertation. This section adds additional detail in the interaction between these two actors including broader historical context, North Korea's overall strategy, and various issues affecting political rapprochement such as North Korea's WMD and ballistic missiles, the abduction issue, and Japan's BMD. It is interesting to note that, while North Korea transitioned to a coercive strategy with its neighbors, including Japan, the development of BMD capabilities in Japan that challenged North Korea's means of political coercion (i.e., its ballistic missile program) and the rise of Japan generally in terms of economic and military autonomy, have not resulted in more confrontation and violence from North Korea. In fact, the opposite response was displayed, at least in terms of the North's coercive strategy with Japan in conditions short of war.

Historical Context & Strategy

During the 500-year period of the Choson Dynasty in Korea until the Japanese Meiji Restoration (1392-1868), with one conflictual exception in the Imjin War (1592-98), Korea maintained a relationship toward Japan regulated by the "Kyorin order," where Korea chose to deal with Japan as a "neighbor" (unlike Korea's servitude relationship toward China during this period). However, Japan changed its domestic position, including use of strong new titles, which was reflected in diplomatic exchanges with Korea at the outset of the Meiji government. These changes, which Japan considered

⁵¹⁹ Page 124.

in keeping with Western or international law and standards, included: consolidation of Japanese representation to Korea now coming from the “emperor” in Tokyo, a title used only of China’s leader, intentionally placing Korea in an inferior if not servitude relationship with Japan; and, declaring only Japan to be the sole protector of Korea and preventing invasion from Russia or others. Korea was appalled (Kim Y. , 2006).⁵²⁰ This relationship preceded Japan’s harsh imperial period and was followed by conflict in WWII and the Korean War—two wars which spanned a very brief time in the overall relationship between Japan and Korea. This is why it is difficult for North Korea—and Koreans generally—to consider recent political interaction in isolation of their very lengthy past interaction. Koreans tend to remember the historical issues openly; Japan is criticized for wanting to set them aside.⁵²¹

An effect of superpower détente was that it permitted an increase in political and economic contact and exchanges between North Korea and Japan through the 1970s with periodic hints of normalization.⁵²² Into the 1980s, North Korean relations with Japan appeared to offer promise as North Korea sought joint ventures to stimulate economic

⁵²⁰ Pages 3-4, 23-6, and 30. All economic and cultural interaction between Korea and Japan was governed in this way, though the regional powers in modern Tokyo clearly received deference from Korea’s central government.

⁵²¹ According to Samuel Kim, “The relationships between the two Korean states and Japan carry some of the heaviest historical baggage in contemporary international relations” (Kim S. S., 2006); page 166. For example, McCormack suggested Japan tends to have a short memory of history and its role in it, while “Korean memories are long,” including the 400-year old Japanese invasion of Korea for which Japan has not yet apologized (McCormack, 2004); pages 124-5. The invasion was bad enough, but it was the plundering that stokes Korean anger: Japan took countless potters along with “doctors, printers, artisans in wood and metal, paper makers, scroll makers, painters, dyers, weavers and spinners, garden designers and experts, scholars, large numbers of young women, many cultural treasures, and printing presses—the ‘high-tech’ items of their time—while also selling many Koreans as slaves or exchanging them for guns or silk.” Japanese history in Korea made headlines even as ROK’s president-elect begins her relationship with Japan, claiming Japan needed to “squarely face” its imperial past in Korea (Alpert, 2013).

⁵²² In 1970, for example, North Korea was open to the idea of independent political relations with Japan, without sense of obligation to Communist powers China or the Soviet Union. This was evidenced by the quick return of a Japan Airlines aircraft after it had been hijacked to Pyongyang in April (Kiyosaki, 1976); page 90.

development; the North-South dialogue seemed to be easing; and, both China and the Soviet Union were more cooperative with Japan and the U.S. (Park, Koh, & Kwak, 1987).⁵²³ However, this opportunity was balanced as North Korea, as part of its broad strategy, showed a proclivity toward politically fracturing if not splitting regional actors, such as Japan, from their partnerships and alliances with the United States. It did so through various political and military activities under past general deterrence conditions, and could do so explicitly as part of its wartime strategy against multiple parties in a broader peninsular war. North Korea uses this strategy of reducing a regional actor's commitment in order to isolate it and improve the prospects North Korea will achieve its aims or advance its position.⁵²⁴

Rapprochement & Related Issues

The prospects for rapprochement broke down significantly in the mid-1990s when Japan raised the abduction issue and North Korea placed heavy financial demands on Japan. The abduction issue again impeded progress in talks in 1997-98, just prior to the North Korean Taepodong missile test that flew directly over Japan (Hoare & Pares, 2005).⁵²⁵ Inference can be drawn from this as coercion by North Korea for financial compensation without having to give on abductions. By the time of the Koizumi summit with KJI in Pyongyang in September 2002, KJI caved in on abductions and admitted to wrongdoing by elements of his government. However, this did not play out well

⁵²³ In Jung Hyun Shin's chapter, "North Korea's Policy toward Japan: Perceptions, Goals, Trends." Pages 275-7.

⁵²⁴ While there are clearly economic considerations for Japan's foreign policy generally, national security is the primary factor in its relations with North Korea. The good news for Japan is that, contrary to popular belief, North Korea behaves in a logical and understandable way, consistent with its strategic culture of national survival (Hagstrom & Soderberg, 2006); pages 6-8.

⁵²⁵ Pages 134-5. From the Japanese perspective, North Korea did not develop into villain status until after the Cold War and several informal and formal meetings between the two. Hoare and Pares suggest the people of Japan actually held North Korea in higher regard than the South for most of the postwar period.

politically among Japan's population. Pritchard suggests Japan perhaps overplayed the abduction issue to the detriment of positive diplomatic relations (Pritchard, 2007).⁵²⁶ The abduction issue not only made progress difficult, but resulted in reduced, not increased, Japanese economic interaction with North Korea (Bechtol, 2007).⁵²⁷ Regardless, sentiments of the ethnic Korean Zainichi population in Japan are still raw on both sides (Ryang & Lie, 2009).⁵²⁸

North Korea has much to be gained in its influence over Japan by remaining a nuclear power while Japan's position is to be conventionally-armed only. North Korea is currently in a dominant position over Japan, which has maintained a generally defensive-oriented posture. According to Jeffrey Kawada, North Korean opposition to Japan is not much more than branding Japan as a threat and Japan's BMD part of a regional arms buildup or a "plan of future aggression" (Kawada, 2004).⁵²⁹ But North Korea may actually fear Japan's militarization as part of its overall rise in autonomy (Takesada,

⁵²⁶ Pages 86-9. For example, Japan sought to have North Korea retained on the U.S. terrorism list because of its abductions of Japanese. The U.S. not only did not want to do that because it was not the cause for North Korea's placement on the U.S. list, but Japanese steady prioritization of the abduction issue was jeopardizing multilateral progress on North Korea's nuclear program through the Six Party Talks.

⁵²⁷ Pages 139-40. Japan, for example, along with others provided North Korea with substantial aid in the 1990s, though North Korea felt this was simply part of what Japan "owed" it as part of Japan's colonial abuses. In 2001, when revelations of North Korean abductions gained traction in Japan, humanitarian aid to North Korea was stopped and by 2005 formal trade was at a 25-year low: \$190 million in 2005, most of which were North Korean exports to Japan.

⁵²⁸ In Sonia Ryang's chapter, "Visible and Vulnerable: The Predicament of Koreans in Japan," pages 62-3. For example, following media announcements 17 September 2002 that North Korean leader Kim Jong-Il admitted his agents abducted 13 Japanese citizens, Zainichi Koreans received death threats and Korean children were spat on and harassed in public. She contrasts Japanese public sentiment toward North Korea (including North Korean sympathizers in the Zainichi community) with that of South Korea, where "Japan has seen a boom in South Korean cultural products in recent years." According to Lie, the once two-million strong Korean diaspora, or Zainichi population, living in Japan after WWII as a consequence of Japan's imperial period, remains a reminder of the past and of unsettled business between the two states. Zainichi, even older ethnic Japanese citizens, Lie argues, respected Kim Il-Sung though KJI was not well thought of in Japan (Lie, 2008); pages 30-1. Such Koreans still abide by an "ideology of return."

⁵²⁹ Pages 25-6.

2001).⁵³⁰ North Korea would likely feel very threatened by Japan should it build offensive strike capabilities, or a nuclear weapons program—capabilities that might push North Korea to consider preemptive military action against Japan under some scenarios for which Japan’s current defensive posture does not provide adequate autonomous protection or retaliatory capacity.⁵³¹ The North Korean decision to resume work on nuclear weapons, and their admission to such in diplomatic meetings in late 2002, was a setback to North Korea-Japan relations and possible rapprochement (Schneider & Post, 2002).⁵³² The second Koizumi summit with KJI occurred in early 2004. It did not yield any breakthroughs and essentially ended the robust period of rapprochement dialogue.

Ballistic missiles, either directly or indirectly, serve a valuable coercive purpose for North Korea against Japan. Coercing Japan likely brought several political, tangible,

⁵³⁰ See the section entitled, “CHINA’S AND NORTH KOREA’S OPPOSITION.” According to Takesada, China’s interaction with North Korea’s leadership caused North Korean criticism to stiffen. Part of Japan’s rise in autonomy has involved an increase in its freedom of action. This is characterized militarily by increased capabilities, longer and further deployments, and more assertive operations including engagement with North Korean ships. But it is also shown in greater flexing politically, such as pursuit of a UNSC permanent seat. Japan also has a missile program to support its space program—a capability that could be used to sharpen Japan’s overall technological capacity or edge. This edge in technology could also aid in continuing its advancement of credible, effective BMD components and help it acquire the needed skills for converting its missiles into offensive ballistic missiles should it deem it necessary to do so.

⁵³¹ Interestingly, George Quester suggests Japan (along with Sweden, Argentina, Australia, and Brazil) at one time possessed scientists and political or military leaders who welcomed the prospect of developing and acquiring nuclear weapons of their own for personal, if not national, power and glory (Manwaring, 2001); page 41.

⁵³² In Merrily Baird’s chapter, “Kim Chong-il’s Erratic Decision-Making and North Korea’s Strategic Culture.” Page 109-10. Samuel Kim argues Japan sees value in normalizing relations with North Korea (Kim S. S., 2006); pages 185-6. Normalization is valued by Japan for three reasons: (1) to finally clear its WWII political slate; (2) to position itself for more effective economic competition, recognizing Russia and China, for example, have formal relations with both North and South Korea; and, (3) North Korea collapse scenarios are all problematic for Japan. However, without an immediate crisis at hand driving Japan and North Korea to diplomatic engagement, there may be little incentive for Japan to overreach its positive engagement and appear “soft,” perhaps inciting North Korean threats (Yun & Shin, 2006). In Robert Carlin’s chapter, “Talk to Me, Later.” Page 20. While Japan has no embassy in North Korea, the General Association of Korean Residents in Japan (also commonly called either “Chongryun” or “Chosen Soren”), formed in Japan in 1955 as an organization aligned with the interests of North Korea, has served in some cases as a “de facto embassy for Pyongyang” (Kim S. S., North Korean Foreign Relations in the Post-Cold War World, 2007); page 34.

and psychologically emotive benefits to KJI, though he did not act independent of the influence of other factors. However, given Japan's deterrence strategy, one dilemma in North Korean decision-making was that to deny Japan success in deterring North Korea was to stoke the fires inside Japan that it might need offensive conventional strike, and possibly nuclear, capabilities to sufficiently deter North Korea—an unwelcome prospect inside North Korea.⁵³³

⁵³³ Detailed analysis of possible effects of Japan's BMD upon North Korean perceptions, decisions, and behavior, stemming from this chapter will be provided in Chapter Seven: Quantitative Analysis.

CHAPTER SEVEN: QUANTITATIVE ANALYSIS

Introduction

Overview

The analyses in this chapter attempt to capture the effect of BMD on Japan's overall relationship with North Korea, controlling for other environmental factors in the Northeast Asia regional security situation. The central question is whether Japan's BMD program in any period of its development had a deterrent effect toward North Korea. To unpack the role of Japan's missile defenses on North Korean behavior, the chapter explores quantitative data presented in dyadic form between the two countries in the exclusive period 1990-2011. This period is bookended approximately by the fall of the Soviet Union and the end of the Cold War at one end and the death of North Korea's second leader at the other. The first bookend is important since it created a rapid and significant withdrawal of Soviet power, including marked reduction in political, military, and financial aid to North Korea. The second bookend is important because Kim Jong-Il, North Korea's second leader, ruled North Korea *de facto* or *de jure* for essentially the entire period until his death, making deductive analysis about North Korea's decision-making and behavior in this period centrally focused and more reliable.

Certain other actors and factors may impact the influence of Japan's BMD on North Korean behavior toward Japan: the U.S., as a dominant actor and historical antagonist; the PRC, as a key North Korean ally; ROK, as a cultural and military opponent on peninsula; possible periods of intense political interaction between Japan and North Korea, such as rapprochement discussions; and, the politics of North Korea's regional opponents whose policies ebb and flow with opposing parties in power. These

factors may affect the potential influence of Japan's BMD as a deterring instrument in general deterrence conditions.

Key Findings

The analyses below lend support to the idea that Japan's BMD provides deterrent effects, but these can be both reinforcing and undermining effects that occur at different times of the BMD program's cycle of emergence before, during, and after its deployment. This was seen in three ways in the time-series analysis of the Japan-North Korea case: 1) Japan's BMD strengthened deterrence by *increasing cooperative* North Korean behavior toward Japan early in the BMD R&D phase, prior to any deployment commitments; 2) Japan's BMD undermined deterrence by *increasing conflictual* North Korean behavior toward Japan when BMD was first deployed; and, 3) Japan's BMD strengthened deterrence by *decreasing conflictual* North Korean behavior much later in BMD employment under provocative conditions.

Organization of the Chapter

Following the present introduction, the chapter is organized into four subsequent parts: a theoretical considerations section, which briefly revisits key deterrence issues and the basic hypotheses considered in this chapter; a design and data section, describing the general design of the statistical analysis approach, the dataset used for the various regression models, and a description of the dependent and independent variables; an empirical analysis section, which assesses the models, variables and hypotheses; and conclusions.

Theoretical Considerations⁵³⁴

⁵³⁴ The significant body of theoretic arguments on deterrence and the role of missile defenses to support or undermine deterrence is taken up in Chapter Three: Literature Review.

General vs. Immediate Deterrence

As described in more detail in Chapter Three: Literature Review, scholars have for decades recognized a conceptual separation of deterrence activities distinguished by time and circumstance most often described as “general” and “immediate” deterrence. General deterrence refers to the purposeful security-oriented management of a relationship with a potential adversary under the relatively stable, peacetime conditions of day-to-day circumstances. General deterrence is that period of interaction short of conflict, though relational disturbances or provocations between opponents are certainly within the boundaries of general deterrence. Immediate deterrence implies a significant transition into crisis that could lead to war (Dougherty & Pfaltzgraff, 2001).⁵³⁵

Quackenbush describes general deterrence in broad terms, recognizing the complexities associated with relations short of war—when most interaction occurs (Quackenbush, *Understanding General Deterrence: Theory and Application*, 2011).⁵³⁶

What is recognized generally is that the perceptions of political leaders change over time as circumstances change, thus altering their cooperative and conflictual behavior. But these behavioral dynamics are not limited to simply moving from peacetime to crisis and from crisis to conflict—there exist many *gradients* in between. Japan’s BMD program has emerged within and across these gradients under general deterrence conditions and is recognized by Japan as an integral component of its overall deterrence strategy. One key question is whether its BMD has had any deterrent effect or, more precisely, whether there have been deterrent effects across the spectrum of the Japanese BMD program’s development over time.

⁵³⁵ Pages 372-3.

⁵³⁶ Page 4.

One way to explore such possibilities is to break up Japan's BMD program into meaningful parts for more refined statistical analysis. Analyzing North Korea's cooperative and conflictual behavior toward Japan provides one way to measure their overall satisfaction with their relationship with Japan, including possible effects of Japan's BMD upon the North's behavior. This approach is similar to that taken by A. Cooper Drury and Stephen Quackenbush in their analysis of U.S. national missile defenses in other deterrence relationships (Drury & Quackenbush, 2007).⁵³⁷ Such *gradients of interaction* also suggest that deterrence should not be conceptualized as strictly an act-restraint, zero-sum dynamic. Rather, deterrence success can exist in general deterrence conditions in terms of acceptable "direction" where success can be seen in the following ways: 1) *increased cooperative* adversary behavior toward the deterrer; and, 2) *decreased conflictual* adversary behavior toward the deterrer. This is to say that under general deterrence conditions, deterrence success does not demand absolute cooperative behavior from the adversary and absolute omission of conflictual behavior; this is unrealistic. Improvements in the *direction* of behaviors, however, could be considered acceptable measures of deterrence success. When considering gradients of interaction, one can also explore deterrence value and outcomes created through the mitigation of conditions such that they do not get worse: 3) *no decreased cooperative* adversary behavior toward the deterrer; and, 4) *no increased conflictual* adversary behavior toward the deterrer. The first two conditions indicate measurable change in adversary behavior and in a certain direction; that is, one direction can strengthen deterrence and the other undermine it. They provide two measurable ways to quantify deterrence success. The

⁵³⁷ Pages 9 and 13-4.

latter two conditions do not measure deterrence success, but may provide indications that it is not failing.

BMD in General Deterrence.

No single theory of the role or effect of missile defenses in general deterrence exists within the literature. Further, much of the BMD-related research focuses upon the U.S. national missile defense system and potential attacks on the U.S. Homeland, or how BMD might protect or deter in the midst of a regional conflict usually involving U.S. conventional forces in combat. There are, however, some arguments concerning its possible deterrent efficacy under general deterrence conditions, some of which could apply to the Japan-North Korea relationship.⁵³⁸

Theoretically, BMD could, under some circumstances, support or undermine deterrence. BMD could also operate in both directions at the same time, influencing one perceptual part of an adversary's calculus in one way, and another part of calculus in the other. In the adversary's thinking, BMD might deny benefits, impose costs, provide benefits of restraint, or mitigate costs of restraint. For example, BMD could enhance deterrence if perceived by North Korea as imposing costs by demonstrating Japan's commitment to defend its population, and signaling North Korea its stake in their security relationship such that Japan would not only commit significant resources to address a perceived North Korean threat but would accept increased risk in fielding the capabilities resulting from that financial commitment. A demonstrated Japanese willingness to

⁵³⁸ Further analysis of these arguments in context of both the qualitative analysis from the dissertation's Strategic Profile and empirical analysis from this current chapter will be evaluated in Chapter Eight: Conclusions. Some of the missile defense-deterrence arguments are, however, summarized here to help better understand the statistical analyses later in this chapter. A table of the various missile defense-deterrence arguments identified in the dissertation's research is found in Table 1 at the conclusion of Chapter Three: Literature Review.

employ its BMD to engage a North Korean missile under general deterrence conditions would likely signal similar resolve during times of dire crisis or conflict, raising the costs to North Korea and thus strengthening the deterrence of such crises from ever occurring. North Korea's costs of continuing with its coercive strategy against Japan could also include needing to build more ballistic missiles or developing BMD countermeasures. Such Japanese demonstrations with its BMD under general deterrence conditions could also deny North Korean benefits by reducing the political coercive power of North Korea's ballistic missiles over Japanese policy more broadly. Further, Japan's BMD program could help North Korea's leadership recognize attractive benefits of restraint by influencing them to seek a long-term political bargain with Japan earlier rather than later when North Korea's military position was stronger. Another perceived benefit of restraint could be dealing with Japan disincentivized to pursue its own nuclear weapons program—a prospect that could change without North Korean restraint in its ballistic missile-backed coercion strategy. Japan's BMD could also mitigate North Korea's perceived costs of restraint in proceeding with an active coercive strategy against Japan by demonstrating to North Korea the defensive nature of Japan's BMD and Japan's resistance to committing new defense spending on *offensive* capabilities instead. On the other hand, Japan's BMD deployment might push North Korea to become more provocative, coercive, or conflictual generally by, for example, developing or actually employing some other means of coercion for which Japan is not yet prepared to defend itself. Each of these types of activities can emerge in general deterrence conditions and in different periods of Japan's BMD program development.

Japan, in many ways, followed the same basic pattern of BMD development over time as did the United States, progressing from minimal research and studies, to extensive research and development (R&D), to decisions to acquire or produce, then deployment and operational employment (Yanarella, *The Missile Defense Controversy: Technology in Search of a Mission* (Revised and Updated Edition), 2002).⁵³⁹ These factors in many ways mirror those of Japan's leaders regarding development and acquisition of BMD. Burns also offers several important dates across Japan's BMD program (Burns, 2010).⁵⁴⁰ In this chapter, Japan's BMD program has been divided for analytic purposes into the following timeframes: BMD-related R&D and investment following the North Korean TD-1 missile test; actually deciding to acquire BMD; deploying BMD; and, readiness to employ BMD against a North Korean TD-1 missile.⁵⁴¹

⁵³⁹ Page 3. For example, in his revised volume, Yanarella offers an historical reflection of key early decisions relating to ABM in the United States. These decisions included: in 1958, McElroy granting the U.S. Army exclusive rights to developing ABM capabilities; in 1961, McNamara deferring production and deployment of Nike-Zeus; in 1963, McNamara initiating R&D of Nike-X over Nike-Zeus; in 1967, Johnson deploying Sentinel; and, in 1969, Nixon deploying Safeguard over Sentinel. These decisions, he suggests, were shaped by strategic, technological, political, organizational, and economic factors.

⁵⁴⁰ Pages 101-2. Burns summarizes key periods and Japanese decision points as follows: 1980s, increased awareness of a growing North Korean threat and decision to "study" the threat and role of missile defenses; 1993, Nodong-1 test; late 1998 decision to reinvigorate missile defense research following the TD-1 test; late 2003 decision point to expand missile defense capabilities independent of a U.S. national or global system; May 2004, decision to purchase SM-3 interceptors for 2007 deployment on a Japanese Aegis destroyer; March 2008, replacement of six PAC-2 missile batteries with deployment of PAC-3 missiles; September 2008, successful test of two Japanese PAC-3 interceptors, using JASDF personnel, at White Sands Missile Range in the U.S.; and, 17 December 2008, Japan conducted its first actual intercept of a ballistic missile target using Japan's JS Kongo destroyer hitting a target launched from Hawaii. O'Donogue also recaps Japan's interest and decision points regarding development of a missile defense program (O'Donogue, 2000); pages 5-6.

⁵⁴¹ Historically, three Japanese governmental agencies stood up to support Japan's growing BMD activities. The first agency was the TMD Working Group (TMD WG), a joint U.S.-Japan organization subordinate to the Security Subcommittee, Security Consultative Committee (SSC-SCC). This agency stood up in December 1993 after North Korea launched a Nodong missile into the Sea of Japan in May 1993 and has addressed primarily technical issues. Participants in the TMD WG represent DoD's Office of the Secretary of Defense (OSD), BMDO, Japan's Ministry of Foreign Affairs (MoFA), and its JDA. The second agency was the JDA's Office of Ballistic Missile Defense Research (BMDR), created in April 1995 to assess, in partnership with the U.S. Ballistic Missile Defense Organization (BMDO) and DoD's Pacific Command in Hawaii, the threat from North Korea's Nodong-1 missile. The third organization was the Study Group on the Defense Technology Base, established in August 2000 by the JDA and Japan's Ministry of Economy,

Hypotheses

Hypothesis 1: Japan's BMD will result in increased conflictual North Korean behavior toward Japan. Generally, one would expect Japan's BMD to create both cooperative and conflictual North Korean behavior toward Japan, consistent with the wide range of arguments presented in the missile defense-deterrence literature. BMD does not provide Japan a "solution" to all negative, conflictual North Korean behavior. More specifically, however, one would expect a higher level of negative, conflictual interaction between North Korea and Japan given their history of conflict, Japanese domination during the imperial period, and Japan's support for U.S. forces in the region especially during the bloody Korean War. Further, as North Korea developed ballistic missiles and used these as primary instruments of their strategy of coercion, one would expect Japan's decision to research, development, and then acquire and deploy BMD to significantly degrade the North Korea-Japan relationship, undermining deterrence. Given these expectations, it is hypothesized that the North Korea-Japan relationship would reflect a steady decline in cooperative relations and behavior. It is further hypothesized that Japan's BMD would amplify the otherwise conflictual North Korea-Japan relationship, making interaction worse over time, especially when BMD became operationally deployed.

Hypothesis 2: The dominance of the U.S. over Japan will significantly affect North Korean behavior toward Japan. One might also expect a strong, even overpowering effect of U.S. interaction with North Korea, since the U.S. retained an essentially dominant position in its relationship with its ally, Japan, during the period of

Trade and Industry (METI). This agency, while not designed to address BMD issues, evaluated costs of BMD system components such as electronics and communications capabilities (Swaine, Swanger, & Kawakami, 2001); pages 32-3.

the dissertation's research. As Japan's principal ally, and enemy of North Korea, one would expect the U.S. to try to protect Japan through positive reciprocity with North Korea or reducing conflictual North Korean behavior toward Japan through pressure. As such, it is expected that across the stages of Japan's BMD program conflictual U.S. behavior toward North Korea would increase North Korean conflictual behavior toward Japan, undermining deterrence; and cooperative U.S. behavior to increase the cooperative North Korean behavior toward Japan, strengthening deterrence.

Hypothesis 3: The dominance of China over North Korea will significantly affect North Korean behavior toward Japan. As North Korea's principal ally, one would expect China to protect North Korea in some ways, though not at the expense of China's own security interests including those interests vis-à-vis Japan where China may view itself disadvantaged by a stronger, more militant Japan. Therefore, it is expected that China would employ more cooperative behavior toward North Korea as its ally and, as a strong ally, would increase North Korean cooperative behavior toward Japan, strengthening or not undermining deterrence.

Design and Data

The regression and other statistical analyses were performed using the *gretl* software package, available online (Cottrell & Lucchetti, 2012). This software interfaces with a variety of data spreadsheets including Microsoft Excel—the format in which the dissertation's database was constructed. All regression analyses and related statistical tests, such as tests for serial correlation, for example, were conducted using *gretl* software.

Two dependent variables are used: one for *positive, cooperative* North Korean behavior toward Japan and one for *negative, conflictual* North Korean behavior toward Japan. The models used for cooperative and conflictual North Korean behavior include the same independent variables and are organized the same way.

Dataset Description

The dataset was provided by Dr. Doug Bond and Virtual Research Associates, Inc. (VRA®). The dataset was titled “Events Data 1990-2011.”⁵⁴² Data were gathered through automated software capabilities and derived from either Reuters or AFP (Agence France-Presse) news sources. Data were provided in Microsoft Excel spreadsheet form in three basic sets of information: monadic; dyadic; and, BMD terms. The first set of data was monadic and addressed a wide variety of information pertaining to a set list of states, one state at a time. The state-month, therefore, was the unit of analysis. Monthly data were collected from news reports scanned using VRA software for the period 1/1/1990 through 12/31/2011 (22 years). Aggregates for each month (by each state) were compiled for IDEA event form codes 1-22, inclusive. These codes include both cooperative (cue categories 1 to 10) and conflictual (cue categories 11 to 22) events. The dataset also included data for subcategories, monthly averages, and cumulative scores (totaling 72 different categories). The geographic scope of the monadic data included 10 countries: Australia, China, Iran, Japan, Libya, North Korea, Russia, South Korea, Syria, and the

⁵⁴² The dataset was derived using VRA® Reader v. 3.11.0., a proprietary software capability used to search large amounts of digital news reporting. Further information on the company is found at <http://www.vranet.com>. Further information on the dataset and its description can be found in Chapter Four: Research Design.

United States. A total of 2,640 monthly records were provided across the 72 different categories in the monadic data (Events Data 1990-2011, 2012).⁵⁴³

Figure 3: Dataset Sample

SrcName	TgtName	Year	Month	GPCount	GPCum	GNCount	GNCum
JPN	PRK	2009	1	2	2	0	0
JPN	PRK	2009	2	8	12.6	1	-0.1
JPN	PRK	2009	3	9	20	9	-23.4
JPN	PRK	2009	4	1	1	8	-32.1
JPN	PRK	2009	5	1	1.5	1	-2.2
JPN	PRK	2009	6	3	7.7	2	-5.6
JPN	PRK	2009	7	2	5.8	1	-1.3
JPN	PRK	2009	8	0	0	0	0
JPN	PRK	2009	9	0	0	0	0
JPN	PRK	2009	10	2	6.3	1	-0.1
JPN	PRK	2009	11	0	0	0	0
JPN	PRK	2009	12	2	2.6	0	0

The second set of data was dyadic, where the unit of analysis was monthly dyadic scores for cooperative and conflictual behavior between two states. A sample of dyadic data from the dataset is seen in Figure 3. Data were also collected from 1/1/1990 through 12/31/2011 (22 years) and included the same 10 countries as monadic data. Dyadic data reflect *directional* behavior from one of the 10 states toward another of the 10 states. Directional data include a numeric count of events and a cumulative score for each month (on the Goldstein scale); the numeric counts and cumulative scores provide both cooperative and conflictual directional behavior. These types of data are recorded for each state against the other nine states. Unlike the monadic data, with 72 different categories and subcategories, dyadic data included eight categories for each entry: the name of the source state (SrcName); the name of the target state, or state-level object of the source-state's behavior (TgtName); the year of the entry (Year); the month of entry

⁵⁴³ See the worksheets labeled "Monad Notes" and "Monadic Monthlies."

(Month); the Goldstein Positive Case numeric count (GPCount); the Goldstein Positive Cumulative weighted score (GPCum); the Goldstein Negative Case numeric count (GNCount); and, the Goldstein Negative Cumulative weighted score (GNCum). The weighted sums accentuate high intensity actions (Events Data 1990-2011, 2012).⁵⁴⁴ The Goldstein scale was developed to provide placement of international events that were categorized by Charles McClelland in the World Event/Interaction Survey (WEIS) onto a negative/conflictual-positive/cooperation scale. This scale has a numeric value range from -10.0 (conflictual interaction bordering/starting war) to +8.3 (cooperative interaction associated with close partnerships or alliances). While the WEIS categories provided a meaningful “ladder” of international dyadic interaction, the Goldstein scale adds intensity weights that capture the direction and levels of interaction more appropriately and with greater utility in making comparisons (Goldstein, 1992).⁵⁴⁵ A summary of Goldstein’s application of weights to WEIS events is provided in Table 8 below.

The third set of data provided in the VRA dataset was accumulations of specific news reports that searched out specific terms in the Japan-North Korea dyadic relationship in order to ensure all reports dealing with Japan’s BMD were accounted for and to provide a summary of the contents of the news reports themselves.⁵⁴⁶ Since the methodology used by VRA to identify reports of dyadic significance used the scanning of

⁵⁴⁴ See the worksheets labeled “Dyad Notes” and “Dyadic Monthlies (Non-Null).” Some months had no data as there were no reports in those months for this dyad. In these cases, to facilitate regression analysis, new worksheets were created by copying the dyadic sheet and manually adding months to the data. A zero (0) was added to any monthly record created having no original data. Thus, a complete time-series set of data was available with all months represented across the 22-year dataset period—a prerequisite for meaningful regression analyses. Figure 3 reflects the original dataset plus some months with 0s added to complete the year.

⁵⁴⁵ See pages 376-7. See McClelland (1999) for the original 1978 article describing WEIS.

⁵⁴⁶ The full contents of the news reports are proprietary; only summaries of key articles could be provided.

only the first two sentences of all available reports, it was possible some data containing largely BMD-specific references were omitted if that term was not used in the first two sentences of the report. Therefore, a supplemental data search was conducted to avoid this gap. These data were then used to create the “BMD Terms” independent variable (described below) and aid in the analysis of the regression modeling results. Reports identified an identity tag for the news report, the date of the report, and a summary of the news item. One worksheet (“JPN>PRK”) captured the dates and summaries of BMD-related articles in context of the overall Japan-toward-North Korea dyadic relationship using key terms related to Japan’s BMD program provided by the author.⁵⁴⁷ These data yielded 479 total records across the 22-year scope of the dataset. The second worksheet (“PRK>JPN”) captured dates and summaries of ballistic missile-related articles within the North Korea-toward-Japan dyadic relationship using key terms related to North Korea’s ballistic missile program provided by the author. These data yielded 244 total records across the 22-year dataset.⁵⁴⁸

Variable Descriptions

⁵⁴⁷ The list of terms requested by the author for use in the VRA supplemental data search included: IMD, TMD, GPALS, Global Protection System, Patriot, PAC-2, PAC-3, ERINT, THAAD, Standard Missile, SM I, SM II, SM1, SM2, SM3, SM-1, SM-2, SM-3, MEADS, Navy Theater Wide, Navy Area Defense, Interceptor, Aegis, and AWS. This list was reduced since some terms did not reveal results in the specific Japan-toward-North Korea dyadic reporting, or terms were generating considerable false reports. The following terms used in the search by VRA for BMD articles in the Japan>North Korea dyad generated accurate reporting results: using the term missile “or” rocket “and” one of the following—GPALS, Patriot, PAC, ERINT, THAAD, SM, MEADS, Aegis, LEAP, BADGE, Hawk, and AWS. This type of search would have accounted for various forms of PAC missiles (i.e., PAC-2, PAC-3, SM-2) and removed false reports of “PAC” or “SM” that had nothing to do with BMD.

⁵⁴⁸ The list of terms requested by the author for use in the VRA supplemental data search included: Scud, Nodong, Paektusan, Hwasong, Musudan, Missile, Rocket, Weapons of mass destruction, WMD, Deterrent, Deterrence, KN-02, TD-1, TPD 1, TD-2, TPD 2, Taepodong, Taepo-dong, Taepo Dong, SS-N-6, Hawsong, No Dong, Ro Dong, and Rodong. This list was modified to remove terms reflecting broader common usage (i.e., “deterrence”) and terms without dyadic results. The North Korea>Japan ballistic missile-related dataset was not used in statistical analysis as the focus of the research was upon correlation of Japan’s BMD to all North Korean behavior.

Dependent Variables: North Korean Cooperative and Conflictual Behavior toward Japan.

There are two dependent variables in the models: one for positive, cooperative North Korean behavior toward Japan, and one for negative, conflictual North Korean behavior toward Japan. This recognizes that a capability or an action associated with deterrence, such as Japan's BMD, can be correlated with more than a military or aggressive North Korean response. Rather, North Korea can respond in a variety of military, political, and economic ways and across a spectrum of positive and negative behavior. For this reason, the dataset provided by VRA was chosen: it provides data separation between cooperative and conflictual dyadic behavior toward Japan, and can give some measure of ordinal strength to the behavior by using a weighting system. Thus, North Korean behavior toward Japan is broken out in the regression models based upon positive, cooperative behavior or negative, conflictual behavior toward Japan.

While there is interaction between North Korea and Japan reported in most months of the 22-year dataset, some months have many more reports than others. In September, 2002, for example, there were 22 positive data records of North Korean interaction toward Japan though, on average, there were only about two such cooperative reports per month. Across the 22-year dataset, there were 443 news reports indicating cooperative North Korean behavior toward Japan and 308 negative reports.⁵⁴⁹ More important than the number of monthly reports, however, are the strength or intensity of any single report and the cumulative strength of reports each month. Using the September, 2002 example, these reports reflect a cumulative weighted positive score of 91.3; the average positive cumulative score was 5.1 per month. For comparative examples, a +5.1 on the Goldstein scale represents providing another actor policy or

⁵⁴⁹ See the worksheet "Dyadic Monthlies (Non-Null)."

material support; a smaller level, such as a +2.0, indicates an apology; whereas a higher level, such as +7.4, reflects extending another actor economic aid (see Table 8). Such ordinal weighting allows relative comparisons among data and results, and offers some insight into the energy behind the positive interaction. The average positive value of each monthly datum in September, 2002, for example, is 4.15 on the Goldstein scale, indicating very positive interaction since zero (0) equals neutral interaction and 8.3 represents the maximum possible positive interaction. In the end, a deterrence strategy is an intentional activity to influence an opponent's security calculus, decisions and, ultimately, his reciprocal behavior—Japan's BMD is no exception. Therefore, North Korea's behavior toward Japan is the best choice for dependent variable. Data for these behavioral variables come from the VRA-provided database (Events Data 1990-2011, 2012).⁵⁵⁰

Independent Variables.

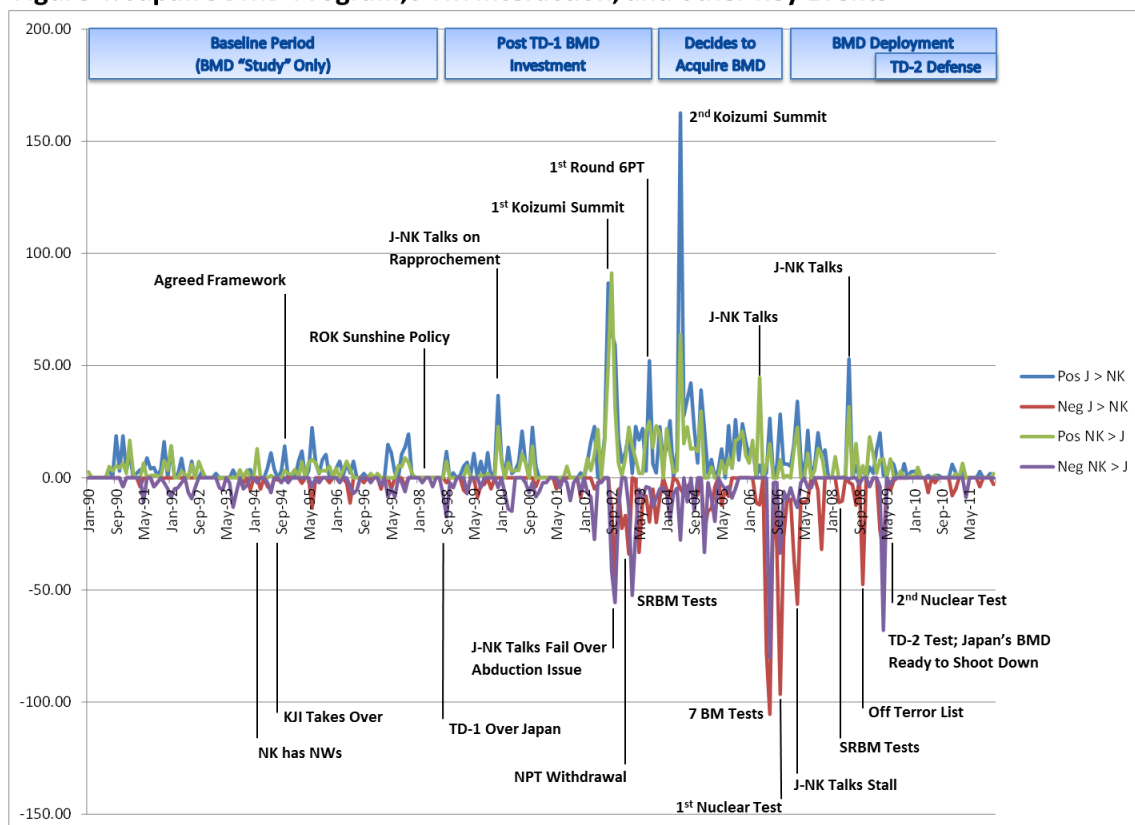
Positive & Negative Japanese Behavior toward North Korea

The positive and negative Japanese behavior variables reflect the in-depth dyadic behavioral interaction from Japan toward North Korea. Japanese behavior reflects both a “positive” and “negative” variable, representing Japan's cooperative and conflictual behavior toward North Korea. For example, the variable of Japanese cooperative behavior toward North Korea is labeled “Positive J>NK” while conflictual behavior is labeled “Negative J>NK.” As with the dependent variable, the Japanese behavioral variables reflect the cumulative monthly intensity of all interactions that month. For comparison with North Korean behavior toward Japan, across the 22-year dataset there were 713 news reports indicating cooperative Japanese behavior toward North Korea and

⁵⁵⁰ See the worksheet “Dyadic Monthlies (Non-Null).”

468 negative reports.⁵⁵¹ Including both components of Japan's interaction with North Korea in a single regression model accounts for the fact that one component (positive or negative) of an actor's behavior toward another state does not occur, nor is it interpreted by an opponent, in isolation of the other component. Since the dependent

Figure 4: Japan's BMD Program, J-NK Interaction, and other Key Events



variable is a reflection of North Korea's cooperative and conflictual behavior toward Japan, models addressing aspects of Japanese influence with North Korea (i.e., Japan's BMD program) ideally include Japan's cooperative and conflictual behavior toward North Korea in order to capture the best balanced dyadic interaction across the models. Including these variables is an essential step in providing a statistical foundation upon which to add the BMD-related variables of Japan's interaction with North Korea. As with

⁵⁵¹ See the worksheet "Dyadic Monthlies (Non-Null)."

the dependent variable, data for these behavioral variables come from the VRA-provided database (Events Data 1990-2011, 2012).⁵⁵²

BMD Terms

This variable stems from the dissertation's dataset, which includes a supplemental data search of Japanese behavior toward North Korea during the 22-year period, but with an exclusive set of BMD-related terms found within the research for other chapters of the dissertation, including the strategic profile, historical development, and missile defense-deterrence literature review. The months in which these terms appeared in the data across the 22-year dataset were tagged to create a dichotomous independent variable to complement the two Japanese behavioral variables that reflected cooperative or conflictual behavior toward North Korea. The purpose of the supplemental data search was to ensure that all Japanese BMD activity in the data was captured within the statistical analyses.⁵⁵³

The "BMD Terms" variable does not reflect positive or negative behavioral direction nor the cumulative weighting on the Goldstein scale, as the dyadic cooperative-conflictual behavioral variables do. However, like the "Positive J>NK" and "Negative J>NK" variables, the "BMD Terms" variable does reflect behavior from Japan toward North Korea, only that behavior that makes specific reference to Japan's BMD program, components, or use. For this reason, it is added into the model with the two Japanese behavioral dyadic variables that are specified as Japan-toward-North Korea directional behavioral variables.

Taepodong-1

⁵⁵² See the worksheet "Dyadic Monthlies (Non-Null)."

⁵⁵³ See the description of the dataset above for more details.

There are four dichotomous independent variables that reflect the emergence of Japan's BMD program over time.⁵⁵⁴ This set of variables is applied to all but Model 1 in each of the positive (Table 3) and negative (Table 4) regression analyses and, with the +/- Japanese behavioral variables, encompasses the entire period of the 22-year dataset. Applying these variables to the other variables allows analytic comparison with other, non-BMD-related independent variables. The "TD-1" variable represents the time period of September, 1998 through November, 2003, and is coded one (1) for all months within this period and zero (0) otherwise. This period represents the period immediately following the 31 August, 1998 TD-1 missile launch that overflowed Japan, surprising Japan and the U.S. in many ways and threatening Japan physically with debris or impact of a missile failure. It also was a clear political threat to Japan as it responded September 21st with reinvigorated discussions on BMD (Events Data 1990-2011, 2012).⁵⁵⁵ Research projects following the 1998 Taepodong-1 missile test included both internal and the initiation of substantial cooperative projects with the United States. Internally, Japan decided in October 1998 it needed to produce and deploy its own optical reconnaissance satellites in response to public criticism that the Japanese slow response after the launch was due, in part, to slow information-sharing from the United States. Indigenous satellites would enable Japan to reduce dependence upon the U.S. for threat and missile tracking data. Japan also signed a Memorandum of Understanding (MOU) with the U.S. in August 1999 for joint research and production of BMD components specifically relating to the

⁵⁵⁴ These variables are represented in the models by placing a 1 in those months represented by that variable's time period and a 0 in all other months. No variable was created for the baseline period as an important feature of the modeling framework to avoid multicollinearity. See Lewis-Beck (1980), pages 67-8. During the "baseline" period (January, 1990 through August, 1998), Japan began regular "consultations with the U.S. on BMD" in December, 1993, and in December, 1995 "commenced BMD study" including "possible BMD architecture, cost estimation, other issues" (Ballistic Missile Defense (BMD), 2010). Page 6.

⁵⁵⁵ See the year group "1998."

Standard Missile-3 (SM-3) Block II interceptor missile (Swaine, Swanger, & Kawakami, 2001).⁵⁵⁶ The TD-1 period ends with Japan's choices relating to acquisition and deployment of its own BMD system.

Japan Decides

According to Japan's Chief Cabinet Secretary, Japan's leadership on 19 December, 2003 "...decided 'On Introduction of Ballistic Missile Defense System and Other Measures' at the Security Council and the Cabinet Council today." These decisions included the near-term introduction in Japan of Aegis and PAC-3 BMD capabilities (Statement by the Chief Cabinet Secretary, 2003).⁵⁵⁷ This variable - "J Decides" is coded as a one (1) from December, 2003 through February 2007, and zero (0) for remaining months. Significant research, development, budgetary demands, improved command and control architectures, and military planning occurred during the December 2003-February 2007 period. The July, 2006 multiple launches of ballistic missiles by North Korea prompted Japan to "front-load" and expedite deployment of Aegis and/or PAC-3 systems (Kaneda, Tajima, Kobayashi, & Tosaki, 2007), the next variable intended to capture the Japanese BMD process.⁵⁵⁸

Japan Deploys

⁵⁵⁶ Pages 34-5. This MOU obligated Japan only to prototype production of: the SM-3 nose cone; the propulsion system of the SM-3's second stage; the infrared seeker; and, the new kinetic warhead. Japan decided in November 1998 to develop its first-ever satellite reconnaissance capability (two radar, two electro-optical satellites) at a cost of around \$2 billion, providing a technological basis for developing space-based early warning systems if Japan chose to do so (see pages 36-9). Japan's space-based reconnaissance satellites, having no infrared sensors, cannot detect enemy ballistic missile launches. They are also multi-purpose systems under civilian, not military control, and are not formally linked to BMD cooperation with the United States. In December, 1998 the Japan-US Cooperative Research Project was approved by Japan's Security Council and Cabinet (Ballistic Missile Defense (BMD), 2010); page 6.

⁵⁵⁷ See paragraph numbers 1 and 2.

⁵⁵⁸ Page 7.

The first deployment of operational BMD occurred in Japan in March, 2007 (Ballistic Missile Defense (BMD), 2010).⁵⁵⁹ This marks the beginning of the “J Deploys” variable (coded as a one [1]). By the time of the 2009 TD-2 missile test, Japan had a portion of its BMD architecture operationally deployed, including PAC-3 land-based interceptors and the Aegis naval vessels carrying SM-3 interceptors. As it is understood that Japan’s BMD was a permanent deployment, this variable is coded as 1 through the end of the dataset in December, 2011, and zero (0) for months prior to March 2007.

Taepodong-2

The final period of BMD dichotomous variables is the “TD-2” which represents the first time Japan placed operational BMD assets on a ready alert status in preparation to engage (shoot down) a North Korean ballistic missile. The modified TD-2 missile (also referred to as an Unha-2) launched on 5 April, 2009, though North Korea had warned UN civil aviation and maritime agencies of the impending launch and associated risks from debris on 11 March. Japan indicated on 18 March it was preparing its BMD for the event (Events Data 1990-2011, 2012).⁵⁶⁰ On March 27th, Japan’s Ministry of Defense, in according with the Emergency-Response Procedures Concerning Measures to Destroy Ballistic Missiles or Other Objects, issued the order to “destroy” the TD-2 if needed (Order for Operation of the Self-Defense Forces Concerning Measures to Destroy Ballistic Missiles or Other Objects, 2009). Aegis BMD assets with SM-3 missiles and PAC-3 batteries were field-deployed and comprised a “BMD Joint Task Force.” While BMD assets were deployed as early as March, 2007, this was the first overt demonstration by Japan to use their BMD to shoot down another state’s ballistic missile,

⁵⁵⁹ The PAC-3 deployed at Iruma Air Base, representing “Japan’s first interceptor in history.” See page 6.

⁵⁶⁰ See the year group “2009.”

and represented a political and military departure, both in terms of political resolve and military capability, from simply having BMD “available.” For these reasons, the timeframe for Japan’s BMD from this event to the end of the dataset (December, 2011) is isolated to capture this departure, and is coded as one (1); other months are coded as zero (0).

Positive & Negative United States (U.S.), Chinese (PRC), and South Korean (ROK) Behavior toward North Korea

The next three groups of variables represent detailed dyadic behavioral interaction from three dominant actors with North Korea in Northeast Asia: the U.S.; South Korea; and, China. Each actor has both a “positive” and “negative” variable, representing that actor’s cooperative and conflictual behavior toward North Korea. For the U.S., for example, the variable of cooperative behavior toward North Korea is labeled “Positive US>NK” while conflictual behavior is labeled “Negative US>NK.” An identical approach is taken for ROK and PRC variables. As with the dependent variable, the behavioral variables of these three countries reflect the cumulative monthly intensity of all interactions that month. For comparison with Japanese behavior toward North Korea mentioned above, across the 22-year dataset there were: 2,097 news reports indicating cooperative U.S. behavior toward North Korea and 1,376 conflictual reports; 661 positive PRC toward North Korea and 246 negative; and, 1,404 positive ROK toward North Korea and 930 negative.⁵⁶¹ Including both components of an actor’s interaction with North Korea in a single regression model is needed to account for the realities of dyadic interaction. The idea with these variables is that each actor’s interaction with North Korea may affect North Korea’s behavior toward Japan. These variables acknowledge those

⁵⁶¹ See the worksheet “Dyadic Monthlies (Non-Null).”

dynamics and are intended as statistical controls to help isolate the effect of Japan's BMD. Data for these behavioral variables come from the VRA-provided database (Events Data 1990-2011, 2012).⁵⁶²

The variable addressing the role or impact of U.S. cooperative and conflictual behavior toward North Korea upon North Korea's behavior toward Japan sought to address whether the dominant position of the U.S. over Japan was correlated to how North Korea interacted with Japan in light of the presence of its BMD. The U.S. variables were included since the U.S. is Japan's principal ally in the region and has been since World War II. A dominant player in the region and leader of the Cold War strategy to contain Communism by armed defense and conflict on the peninsula during the Korean War, the U.S. remains a central actor in North Korean relations, including its behavior toward U.S. allies in the region. China also influences North Korea as its closest ally. Views differ on the strength of China's influence over North Korean national security decision-making, though most agree it exists. China also shares Japan as a common historical enemy with North Korea. However, China's emergence as a global power creates periodic friction with North Korea as their regional—and at least on the part of China—global, interests diverge. China would be expected to have the greatest mollifying effect upon North Korea's provocative activities. Finally, the ROK variables acknowledge the cultural, political, and military proximity of the two Koreas on the peninsula. ROK policies, such as the Sunshine policy of the late 1990s and early 2000s, affect North Korean behavior, if but for a time. South Korea's interaction with the North

⁵⁶² See the worksheet "Dyadic Monthlies (Non-Null)."

might affect North Korea's behavior toward Japan given Japan's security position as a common ally of the United States.⁵⁶³

Political Rapprochement

Japan and North Korea conducted perhaps two meaningful periods of political interaction that could be characterized as serious discussions that could have led to normalization of relations. The first was in the early period of the dataset beginning with the ending of the Cold War and North Korea's loss of patronage from the defunct Soviet Union. Though not as promising possibly as the second timeframe, this early timeframe included a summit in Pyongyang with a legislative delegation from Japan's LDP party, as well as follow up discussions ending approximately November, 1992 when prospects for overcoming differences and gaining national buy-in for normalization across Japan did not materialize.

The second rapprochement period began in December, 1999 when diplomatic talks began in earnest, including discussions in Japan on 9 December, 1999 of lifting *all* sanctions against North Korea (Events Data 1990-2011, 2012).⁵⁶⁴ Other meetings and discussions occurred, but the highlight was clearly the historic summit between Prime Minister Koizumi and KJI in Pyongyang on 17 September, 2002. But rapprochement quickly faced the reality of old differences, and the prospects for normalization dipped: on September 18th, Japanese press questioned North Korea's sincerity; on September 22nd, Japan was contemplating demands upon North Korea for monetary compensation for the abductees taken to the North in previous years; and, by 14 October, Japan's prime minister called North Korea's abduction of Japanese citizens "unpardonable" (Events

⁵⁶³ For more information on the backgrounds of the dynamics and history of each of these actors in the region, see Chapter Two: History and Chapters Five and Six (Strategic Profile Parts I and II).

⁵⁶⁴ See the year group "1999."

Data 1990-2011, 2012).⁵⁶⁵ There were both cooperative and conflictual activities that occurred in the next one to two years, reaching another peak in May, 2004 with the second Koizumi summit meeting. In July, 2004 it was reported talks may resume, but talks broke down after that, effectively ending the prospects for any serious rapprochement, at least for the time being. While there were other meetings and discussions that followed, including meetings in 2006 and 2008, the abduction issue proved a stubborn issue in Japanese politics, and North Korea's coercive strategy had not been abandoned, making 2004 possibly the last period when normalization was actually within sight for the two parties.⁵⁶⁶

Political Parties

The role of political parties can also affect national security policies, activities, budgets, and other behavior, including interaction with North Korea or U.S. allies. The cluster of party-related variables includes: Japan's Liberal Democratic Party ("J LDP"); the ROK Grand National Party ("ROK GNP"); and, the U.S. Grand Old Party ("US GOP"). All three parties were generally described as conservative and often shared common, sometimes hardline, security values and policies. For example, U.S. President Bush and Japan's Prime Minister Koizumi expressed a common, hardline position on

⁵⁶⁵ See the year group "2002."

⁵⁶⁶ The number one (1) was placed in those months identified as part of the rapprochement period; all other months were identified by a zero (0). While the first Koizumi summit with KJI was an historic event, the second summit was essentially an effort to see if any way forward was possible in the near term. While Figure 4 depicts a very high cumulative score for the month of Koizumi's second summit with KJI (May, 2004), the number of reports in that month is exceptionally high, helping to generate such a high overall score. While a high cumulative score usually, and accurately, indicates high intensity, in this particular case, the sheer volume of positive reports that month (64) portrayed perhaps more intensity than what was really there: the average intensity of the reports that month is +2.54 on the Goldstein scale, somewhat higher intensity than the average positive score for the 22-year dataset (+1.74), but not a remarkably high average. Further, the North Korean volume and intensity was a third that of Japan's, indicating more modest North Korean expectations for the 2004 summit.

North Korea at a summit on June 29, 2006 (Events Data 1990-2011, 2012).⁵⁶⁷ Because North Korea reacted differently to policy (e.g., favorably toward the ROK's Sunshine Policy of President Kim Dae-jung's Democratic Party, which included an historic summit meeting in Pyongyang), the role of political parties presenting a relatively common security policy toward North Korea was appropriate.⁵⁶⁸

Analysis

General

Interpretation of the statistically significant coefficient estimates can be illustrated by describing the interpretation of one of the independent variables. For example, in Table 4, the variable "TD-2" reflects a coefficient estimate in Model 2 of -4.31 and an indicator of "***" following the value. This value (-4.31**) denotes the direction of the effect of the TD-2 variable on North Korean behavior, in this case (Table 4) *negative* behavior. For this variable in Model 2, since the sign is a negative (-), and the coefficient estimate in the regression equation is a multiplier for the independent variable, the negative effect indicated (-4.31) upon conflictual North Korean behavior denotes a *positive* direction. That is, "TD-2" lessens conflictual North Korean behavior toward Japan. The "***" indicates statistical significance at the <.05 level.

Two tables summarize the results of the regression analyses and are arranged to allow one to gauge the sensitivity of the coefficient estimates to different model specifications. Table 3 provides results for positive, cooperative North Korean behavior toward Japan; Table 4 lists the results for negative, conflictual North Korean behavior toward Japan. The models are arranged in identical fashion in the two tables. Model 1

⁵⁶⁷ See the worksheet entitled "JPN>PRK."

⁵⁶⁸ The number 1 was placed in those months identified as part of the period when each party was in power; all other months were identified by a zero (0).

includes the cooperative and conflictual Japanese behavior toward North Korea taken from dyadic interaction provided in the 22-year database along with the "BMD Terms" variable as it was closely associated with these two Japanese-to-North Korea variables.⁵⁶⁹ For Model 2, the variables dealing with various time periods of Japan's development of its BMD program were added. This provides the baseline from which to view the results of other independent variables (Models 3, 4, and 5 capture the behavioral variables using the dyadic data provided in the dissertation's 22-year database; Model 6 considers the periods of Japan-North Korea rapprochement interaction; and, Model 7 considers political parties).⁵⁷⁰

Analysis of Independent Variables

Positive & Negative Japanese Behavior toward North Korea.

There exists a relatively strong correlation between Japanese cooperative behavior toward North Korea and cooperative North Korean behavior in return (see Table 3). The "Positive J>NK" variable was statistically significant in all of the positive models, with nearly identical (though modest) positive coefficient estimates ranging from 0.48*** to 0.50*** across models. The stability of the coefficient values across models provides

⁵⁶⁹ This model was used as a starting point to illustrate the basic interaction between Japan and North Korea and to provide comparison with the time-series BMD related variables in the subsequent model.

⁵⁷⁰ See Lewis-Beck's description of dichotomous, ordinal, and nominal variables. Pages 66-7. The "Rapprochement" variables are nominal dummy variables. As opposed to ordinal variables, such as attitudes measured in some order of amount, these nominal variables have no particular order or ranking within their data. In the case of rapprochement, these variables merely acknowledge time periods of purposeful or intense political interaction between Japan and North Korea expressly aimed at furthering the dialogue for political normalization of relations between the two states. The political party variables ("J LDP," "ROK GNP," and "US GOP") are also nominal dummy variables. As opposed to ordinal variables, these nominal variables have no particular order or ranking within their data. In the case of political parties, these variables capture the time periods when Japan's LDP, South Korea's GNP, and the U.S. GOP parties were in power. These actors tend to incur more frequent and/or higher levels of conflictual North Korean behavior toward them when these parties are in power, perhaps owing to their portrayals of North Korea as a threat more than their political opponents do, or perhaps because of the easing of economic interaction consistent with their political opponents (e.g., ROK's "Sunshine Policy" during the 2000s while the GNP was not in power).

some additional confidence in the robustness of the estimates; that is, the other variables, including specific BMD-related variables added to the core set of models, considered across the models did not alter the coefficients of the Japanese behavioral variables. Conflictual Japanese behavior did not statistically correlate to any increase in cooperative North Korean behavior toward Japan, but this was expected.

On the other hand, *both* of the Japanese behavioral variables (reflecting Japan's cooperative and conflictual behavior) toward North Korea were correlated with *negative* North Korean behavior toward Japan (see Table 4). For example, Japan's conflictual behavior toward North Korea ("Negative J>NK") was statistically significant in all models and with slightly more effect than the Japanese behavior in the positive models (Table 3). Coefficient estimates for conflictual Japanese behavior ranged from +0.33*** to +0.40*** across models. The positive sign indicates an *increase* in negative, conflictual North Korean behavior toward Japan, which is to be expected. Cooperative Japanese behavior toward North Korea ("Positive J>NK") was statistically significant in all models. Coefficient estimates ranged from -0.12*** to -0.14*** across models. The negative sign indicates a *decrease* in negative, conflictual North Korean behavior toward Japan, which is also to be expected. The low coefficient values indicate conflictual Japanese behavior may have resonated more with North Korea's leadership than cooperative behavior. Coefficient estimates were nearly identical for both variables in all models. As with the Japanese behavioral variables in the positive models, the stability of the coefficient values across these negative models provides some strength to their estimates; that is, the other variables considered across the models, including specific BMD-related variables added to the core set of models, did not alter the coefficients of

the Japanese behavioral variables. The coefficient estimates for Japanese dyadic

Table 3: Positive/Cooperative North Korean Behavior toward Japan, January 1990 – December 2011

<i>Independent Variable</i>	<i>Model</i>						
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>	<i>(7)</i>
Constant	1.11** (2.25)	0.50 (0.80)	0.53 (.83)	0.36 (0.57)	0.40 (0.58)	0.25 (0.33)	-0.47 (-0.20)
Positive J > NK	0.50*** (18.16)	0.49*** (17.53)	0.49*** (17.30)	0.48*** (17.27)	0.49*** (16.99)	0.48*** (16.18)	0.49*** (17.31)
Negative J > NK	-0.03 (-0.85)	-0.02 (-0.62)	-0.03 (-0.62)	0.02 (0.62)	-0.03 (-0.67)	-0.02 (-0.67)	-0.02 (-0.48)
BMD Terms	0.23 (0.25)	-0.69 (-0.68)	-0.64 (-0.61)	-0.72 (-0.71)	-0.67 (-0.66)	-0.23 (-0.22)	-0.36 (-0.35)
TD-1		2.49** (2.22)	2.52** (2.22)	2.08* (1.86)	2.39** (2.09)	0.86 (0.49)	3.41* (1.72)
J Decides		1.80 (1.30)	1.86 (1.32)	1.00 (0.71)	1.72 (1.24)	1.46 (0.98)	1.85 (0.82)
J Deploys		2.23 (1.51)	2.33 (1.48)	2.07 (1.40)	1.86 (1.22)	2.45 (1.60)	1.62 (0.94)
TD-2		-2.39 (-1.40)	-2.41 (-1.36)	-2.92* (-1.70)	-1.94 (-1.08)	-2.45 (-1.44)	-2.10 (-0.87)
Positive US > NK			-0.003 (-0.17)				
Negative US > NK			0.003 (0.12)				
Positive PRC > NK				0.09** (2.17)			
Negative PRC > NK				-0.08 (-1.07)			
Positive ROK > NK					0.02 (0.78)		
Negative ROK > NK					0.02 (0.59)		
Rapprochement 1990						0.77 (0.59)	
Rapprochement 2000						2.29 (1.43)	
J LDP							-1.21 (-0.71)
ROK GNP							1.47 (0.85)
US GOP							2.03** (2.00)

The figures in each model reflect the coefficient estimate and, underneath in parentheses, associated t-ratio statistic. P-values: *** <.01; ** <.05; * <.10. n = 264.

behavioral variables, however, are both relatively low compared to two of the BMD variables (discussed below). The “J Deploys” and “TD-2” variables were both

statistically significant in all but one model with coefficients from 4.1 to 7.0 in absolute values.

BMD Terms.

The BMD Terms variable was not statistically significant in any of the models in either table reflecting cooperative or conflictual North Korean behavior toward Japan. The purpose of this variable was to supplement the cooperative and conflictual Japanese behavioral variables above in the dyadic relationship with North Korea by highlighting those months in the dyadic variables that specified BMD in the interaction from Japan toward North Korea. For this reason, it was not expected to result in statistically significant results in the regression analyses. Further, the relative stability of the coefficient values across models (ranging from -1.40 to -2.20*) suggests the other variables considered did not alter the coefficients of this variable.

Taepodong-1.

The TD-1 variable was statistically significant with cooperative North Korea behavior toward Japan in several of the models where it was present (+2.49** in Model 2; +2.52** in Model 3; and, +2.39** in Model 5).⁵⁷¹ Japan's BMD activity in this period followed the surprising 1998 TD-1 missile launch over Japan, creating alarm across Japan, and possibly generating a reaction within Japan (including heavy BMD commitments) that North Korea's leadership did not anticipate. The positive effect of the TD-1 variable in the regression models also corresponds to a period of intense cooperative interaction between Japan and North Korea (see Figure 4) as, starting in December, 1999 they met regularly and discussed normalization, culminating in a

⁵⁷¹ However, after further testing, Model 6 also indicated statistical significance. See "Multicollinearity" below.

summit meeting in Pyongyang in September, 2002, and a second summit in May, 2004 (Events Data 1990-2011, 2012).⁵⁷² It is possible that Japan felt it was in a stronger political position having made significant strides in BMD R&D and gained considerable public and legislative backing. North Korea may have calculated that Japan's BMD undercut North Korea's ballistic missile-backed strategy of coercion and that a period of political "warming" may stifle support among Japan's public and legislature for large investments in BMD, ultimately helping North Korea achieve better outcomes from Japan.⁵⁷³ Interestingly, the Sohae Satellite Launching Station began construction in 2001 (Soha Satellite Launching Station, 2012),⁵⁷⁴ *during the TD-1 period*, as North Korea was clearly looking for a way to test missiles in other direction; this facility was used to launch long-range missiles in 2012 that flew in a southerly trajectory and did not fly over Japan's main island of Honshu which includes Tokyo. The positive effect of the TD-1 variable seems to support this period of high-level cooperative Japan-North Korea political interaction and may have contributed to North Korea's decision to seek an alternative missile test facility. The effect of Japan's BMD in the TD-1 period seems to indicate that Japan's BMD *strengthened deterrence* against North Korea.

⁵⁷² See the worksheet entitled "JPN>PRK."

⁵⁷³ For example, North Korea provided advance notice to Japan of its anti-ship missile tests into the Sea of Japan 24 February, 2003 (Nanto, 2003); page 25. Also, the early 2004 summit meeting may have been North Korea's last serious attempt to positively affect Japan's decisions regarding BMD, though in the months preceding the second summit Japan had already indicated decisions in going forward with BMD.

⁵⁷⁴ See paragraph one.

Table 4: Negative/Conflictual North Korean Behavior toward Japan, January 1990 – December 2011

<i>Independent Variable</i>	<i>Model</i>						
	<i>(1)</i>	<i>(2)</i>	<i>(3)</i>	<i>(4)</i>	<i>(5)</i>	<i>(6)</i>	<i>(7)</i>
Constant	-0.71 (-1.18)	-0.97 (-1.27)	-0.91 (-1.17)	-0.99 (-1.29)	-0.87 (-1.04)	-0.81 (-0.87)	1.66 (0.58)
Positive J > NK	-0.14*** (-4.19)	-0.14*** (-4.23)	-0.14*** (-4.05)	-0.14*** (-4.12)	-0.14*** (-4.04)	-0.12*** (-3.31)	-0.14*** (-4.03)
Negative J > NK	0.34*** (8.35)	0.37*** (8.87)	0.40*** (8.25)	0.33*** (6.82)	0.37*** (7.75)	0.37*** (9.00)	0.36*** (8.66)
BMD Terms	-1.98* (-1.78)	-1.38 (-1.12)	-1.64 (-1.30)	-1.49 (-1.21)	-1.40 (-1.13)	-2.20* (-1.72)	-1.58 (-1.27)
TD-1		-1.67 (-1.23)	-1.75 (-1.28)	-1.48 (-1.07)	-1.59 (-1.14)	1.77 (0.84)	-1.32 (-0.54)
J Decides		1.19 (0.70)	0.92 (0.54)	1.21 (0.70)	1.25 (0.73)	2.15 (1.19)	1.92 (0.70)
J Deploys		4.55** (2.54)	4.85** (2.55)	4.19** (2.31)	4.79** (2.57)	4.43** (2.39)	5.29** (2.51)
TD-2		-4.31** (-2.08)	-5.03** (-2.35)	-3.70* (-1.76)	-4.56** (-2.08)	-4.19** (-2.04)	-7.06** (-2.40)
Positive US > NK			-0.02 (-0.66)				
Negative US > NK			-0.04 (-1.50)				
Positive PRC > NK				0.02 (0.36)			
Negative PRC > NK				0.15 (1.65)			
Positive ROK > NK					-0.02 (-0.46)		
Negative ROK > NK					-0.01 (-0.24)		
Rapprochement 1990						-0.53 (-0.33)	
Rapprochement 2000						-4.43** (-2.29)	
J LDP							-2.40 (-1.15)
ROK GNP							-0.11 (-0.05)
US GOP							-0.99 (-0.80)

The figures in each model reflect the coefficient estimate and, underneath in parentheses, associated t-ratio statistic. P-values: *** <.01; ** <.05; * <.10. n = 264.

However, other independent variables appear to affect the TD-1 variable in some models. This does not appear in any of the negative models for the TD-1 variable (Table 4). In these models, the relative stability of the coefficient values across models (ranging from -1.32 to -1.77) suggests the other variables considered across the models did not

alter the coefficients of this variable. On the other hand, in the positive models (Table 3), the statistical significance of the TD-1 variable was reduced: in two models (Models 4 and 7), the coefficients dropped below the $<.05^{**}$ p-value standard (though they indicated p-values at the $<.10^{*}$ level); the third (Model 6) lost all statistical significance (this was reversed in further testing).⁵⁷⁵ In Model 4, the additional independent variable was cooperative and conflictual PRC behavior toward North Korea, with the “Positive PRC>NK” variable statistically significant ($+0.09^{**}$). This suggests the positive influence of China upon North Korea contributed to the cooperative North Korean behavior toward Japan. This effect is a very modest one, however, considering: the very low (.09) coefficient for the PRC variable; and, the fact that the p-value for the TD-1 variable was .06—very close to making the statistically significant threshold. In Model 6, the Rapprochement variables had a more noticeable effect upon the TD-1 variable estimates, moving, for example, from 2.39^{**} in Model 5 to 0.86 in Model 6. This could be explained, in part, by the positive effect of the normalization talks in the early 2000s, for example, but if this were the case one would expect the “Rapprochement 2000” variable to have yielded a statistically significant coefficient. But this was not the case. As already indicated, further testing suggests TD-1 is statistically significant in Model 6. The rapprochement variables did not have any significant effect upon other variables. The political parties variables (Model 7) also effected the TD-1 variable estimates (p-value moved to .09) with the “US GOP” variable indicating a statistically significant $+2.03^{**}$ coefficient. In this case, however, the Constant moved to a negative sign, the only model having such a direction, possibly indicating greater U.S. interaction with North Korea, though positive in direction, decreased the North’s cooperative behavior

⁵⁷⁵ See “Multicollinearity” testing described below.

toward Japan. Since Model 7 contains the highest number of variables (11) it is possible the number of variables also created some unreliable values among some coefficients.

Japan Decides.

On 19 December, 2003 Japan announced it was partnering with the U.S. in co-development of new, more capable BMD missile technologies (Events Data 1990-2011, 2012).⁵⁷⁶ Later it would decide to acquire and field its own BMD capabilities rather than rely on the U.S. or others for defense of Japan against ballistic missiles. This was especially important given the coercive, pressuring nature of the North Korean ballistic missile activity in the past. Japan was not only worried about wartime contingencies with North Korean ballistic missiles possibly armed with WMD; it needed to field a direct counter to the North's strategy of coercion against Japan in general deterrence, sub-conflict scenarios. The coefficient values across models were not significantly affected (i.e., neither lost nor gained statistical significance) suggests the other variables considered across the models did not alter the coefficients of this variable.

While the "J Decides" variable did not produce statistically significant coefficient estimates in any model, during this period positive talks between Japan and North Korea occurred again with Prime Minister Koizumi's summit with KJI in Pyongyang on 5 May, 2004 (Events Data 1990-2011, 2012).⁵⁷⁷ This meeting achieved by far the highest cumulative score of cooperative interaction by Japan toward North Korea in any single month in the 22-year dataset, occurring just five months after Japan made formal commitments to go beyond BMD R&D efforts. In fact, this was the highest scored month on either the positive or negative scale in the entire dataset (see Figure 4). Positive talks

⁵⁷⁶ See the worksheet entitled "JPN>PRK."

⁵⁷⁷ See the worksheet entitled "JPN>PRK."

continued in February, 2006 (Events Data 1990-2011, 2012).⁵⁷⁸ As Japan began to assemble BMD components late in this period, North Korean behavior turned conflictual: on July 4 and 5, 2006, it test launched seven ballistic missiles, including a Nodong, several Scuds, and a TD-2 which failed one minute into powered flight; and, on October 9, 2006 North Korea carried out its first test of a nuclear device (Events Data 1990-2011, 2012).⁵⁷⁹ The North Korean ballistic missile launches occurred prior to Japan fielding any operational BMD systems capable of shooting down North Korean ballistic missiles. North Korea may have calculated it was better positioned to conduct such missile tests *prior to* Japan's BMD deployment. Either way, it seems that the relative proximate timing of the North Korean multiple-salvo ballistic missile tests with the nuclear test was intended to be understood as parts of a single whole: North Korea could threaten its neighbors with WMD-armed ballistic missiles.

Japan Deploys.

Japan fielded its first operational BMD capability in March, 2007. Perhaps not coincidentally, that same month the political dialogue between Japan and North Korea once again stalled over the abduction issue and failure to resolve core issues between the two parties (Events Data 1990-2011, 2012).⁵⁸⁰ Further, and not surprisingly, the "J Deploys" variable did not prove statistically significant with North Korea's cooperative behavior toward Japan (see Table 3); that is, it did not yield any measurable improvement in the Japan-North Korea relationship. This variable did, however, prove statistically significant in all of the models addressing negative North Korean behavior toward Japan (ranging from +4.19** in Model 4 to +5.29** in Model 7). The positive coefficient sign

⁵⁷⁸ See the worksheet entitled "JPN>PRK."

⁵⁷⁹ See the worksheet entitled "JPN>PRK."

⁵⁸⁰ See the worksheet entitled "JPN>PRK."

suggests the new deployment of Japan's BMD systems was correlated with *increased conflictual* North Korean behavior toward Japan—Japan's BMD *undermined deterrence* against North Korea. If North Korea's coercion strategy is in fact undergirded by its ballistic missile force, it appears its leaders were frustrated if not angry by the actual operational deployment of a reliable countermeasure. Their behavior toward Japan reflected such sentiments. Further, the coefficient values across models were relatively stable (ranging from 1.62 to 2.45 in Table 3 and 4.19** to 5.29** in Table 4) suggesting the other variables considered across the models did not alter the coefficients of this variable.

Taepodong-2.

As mentioned above, Japan expedited BMD deployment, a decision that may have contributed to a negative correlation. With the Sohae facility in western North Korea not yet complete (Kimball & Davenport, 2013),⁵⁸¹ and part of Japan's BMD capability operationally deployed, it is possible North Korea's frustration with its new position vis-à-vis Japan coupled with an enduring need to demonstrate its resolve, led KJI to *modify his decision calculus* in several ways concerning the next two North Korean ballistic missile tests. First, rather than launch a long-range ballistic missile over Japan as it had done in 1998, North Korea opted to launch shorter-range missiles again in April and May, 2008 (Events Data 1990-2011, 2012).⁵⁸² Perhaps surprisingly, these events hardly registered for either state in the dyadic Japanese or North Korean conflictual behavioral interaction captured in the database (see Figure 4). Prepared to defend itself

⁵⁸¹ See the year group "2008."

⁵⁸² See the worksheet entitled "JPN>PRK."

with BMD if necessary, Japan did not appear to be flustered by ballistic missile launches, especially short-range missiles. The lack of Japanese reaction is noteworthy.

More interestingly, however, the second way KJI may have changed his decision calculus regarding ballistic missile use under general deterrence conditions occurred during the next and last period of Japanese BMD development (“TD-2”). This BMD variable was not statistically significant in the positive models (Table 3) but was in all of the models analyzing conflictual North Korean behavior toward Japan except Model 4. Coefficients ranged from -4.19** in Model 6 to -7.06** in Model 7; the coefficient was -3.70* for Model 4. The coefficient values across positive models were not significantly affected (i.e., neither lost nor gained statistical significance) which suggests the other variables considered across those models did not alter the coefficients of this variable in the positive models. The coefficient values across negative models were not significantly affected (i.e., neither lost nor gained statistical significance) with the exception of Model 4, suggesting the other variables considered across the models did not alter the coefficients of this variable except in Model 4. In this case, variables reflecting Chinese behavior toward North Korea affected the TD-2 variable (p-value changed to 0.08), losing its statistical significance at the $<.05^{**}$ level. Neither of the PRC behavioral variables, however, was statistically significant and did not significantly affect any other variables. Unlike the positive (+) sign indicated in the “J Deploys” variable in the same models discussed above, the negative (-) signs indicate a *reduction in conflictual* North Korean behavior toward Japan. This suggests that, at least in this last period, Japan’s BMD capabilities had a restraining, *detering*, effect upon North Korean decision-making and behavior.

The change in North Korean behavior centers on the April, 2009 flight test of its long-range TD-2 missile. It was clear North Korean behavior associated with this test was markedly different as this test was carried out with different observable patterns. First, the missile possibly flew a less threatening flight path, such as a higher altitude over Japan and/or a more northerly trajectory over the northern most tip of Japan's Honshu Island away from densely-populated areas (Japan Ministry of Defense, 2009).⁵⁸³ Second, North Korea announced the anticipated launch weeks in advance and with pre-notifications to the International Maritime Organization (IMO) and the International Civil Aviation Organization (ICAO), agencies of the United Nations (Kimball & Davenport, 2013).⁵⁸⁴ This was the first time North Korea had ever placed itself in compliance with providing this type of information to UN agencies (Nuclear Threat Initiative (NTI), 2010).⁵⁸⁵ These changes not only complied with rules for air and naval safety purposes (MacBurnie, 2006)⁵⁸⁶ but also quelled notions of North Korea surprise or ill-intent to Japan and others. But on 18 March, 2009, nearly three weeks prior to the 5 April launch, Japan gave orders to deploy its BMD and shoot down the TD-2 under certain

⁵⁸³ Page 39. The Japanese MOD "estimated that it crossed over Japan;" this articulation was less than definitive or a statement of outrage. Other publications do not even mention overflight of Japan when referring to the 2009 event. For example, the official protest to the government of North Korea never mentioned overflight of Japan (Government of Japan, 2009). On the 2009 test, see also Wright (2009), where he suggests the missile passed over the "northern tip" of Honshu; page 2. On the 1998 test, see Kiziah (2000) who describes the missile's second stage landing east of the Sanriku coast of northern Japan; page 1.

⁵⁸⁴ See the year group "2009."

⁵⁸⁵ See the section entitled "Taepodong-2/Unha SLV," subsection "Testing."

⁵⁸⁶ For example, in a letter to North Korea, a member State of the UN's International Civil Aviation Organization (ICAO), dated 6 July, 2006, ICAO Council President Kotaite cited the North Korean ballistic missile launches and emphasized compliance of States for "coordinating activities that are potential hazardous to civil aircraft." Page 26.

circumstances. By 27 March, 2009 Japan's BMD was ready to shoot (Events Data 1990-2011, 2012).⁵⁸⁷

While North Korea may not have known the exact conditions under which Japan's BMD would have engaged the TD-2, it was public knowledge of the BMD's preparedness and readiness. Thus, the ballistic missile activity of North Korean behavior in this period was, in fact, *more restrained* than in previous actions, demonstrating a consistent pattern of North Korean calculation and action with the correlation of "TD-2" indicated in the regression models. The significant North Korean ballistic missile activity in 2012 (past the cutoff for the dissertation's dataset) was also consistent with this analysis, if not more pronounced: multi-stage long-range missiles were launched on 13 April and 12 December, 2012 from the new Sohae facility, flying southerly trajectories and avoiding Japan's main island of Honshu (Sohae Satellite Launching Station, 2012).⁵⁸⁸ The December event was North Korea's first successful attempt to place a satellite into orbit. This could suggest North Korea was intent on avoiding engagement of its missiles by Japan's BMD simply by flying the missiles away from Japan and its BMD. Unfortunately, North Korea also conducted its second nuclear test in the TD-2 period (Events Data 1990-2011, 2012),⁵⁸⁹ though it did not reflect the level of negative cumulative Japanese or North Korean behavior as did the TD-2 event (see Figure 4).

Positive & Negative United States (U.S.) Behavior toward North Korea.

Surprisingly, neither the cooperative nor the conflictual U.S. behavior toward North Korea proved statistically significant in the positive or negative models of North Korean behavior toward Japan. Though there is a significant volume of U.S. interaction

⁵⁸⁷ See the worksheet entitled "JPN>PRK."

⁵⁸⁸ See paragraphs three and five.

⁵⁸⁹ See the worksheet entitled "JPN>PRK."

with North Korea across the 22-year dataset (Events Data 1990-2011, 2012),⁵⁹⁰ coefficient estimates for U.S. behavior were negligible (for example, -0.003 for “Positive US>NK” in Table 3). Neither was there any indication that these variables had much effect (i.e., neither lost nor gained statistical significance) in altering the strength either way of any of the BMD variables in the cooperative or conflictual models. If the U.S. and Japan were always aligned in terms of policy and behavior, this would be even more surprising; however, they often are not. For example, when President Bush characterized North Korea as part of an “axis of evil,” Japan strongly differed (Events Data 1990-2011, 2012).⁵⁹¹ Further, Japan held secret meetings with North Korea in the period leading up to the 2002 summit meeting between KJI and Koizumi in Pyongyang.⁵⁹² The U.S. was purposely kept in the dark about these secret negotiations (Haruki, 2012).⁵⁹³

Positive & Negative Chinese (PRC) Behavior toward North Korea.

The role of China emerged in the model analyzing cooperative North Korean behavior toward Japan (see Model 4, Table 3). The coefficient estimate was statistically significant (+0.09**) for cooperative Chinese interaction toward North Korea (the “Positive PRC>NK” variable). This positive coefficient for cooperative Chinese behavior suggests that, in this model, China’s positive role tends to increase North Korea’s cooperative interaction toward Japan. Perhaps China sought to alleviate pressure on North Korea to antagonize their mutual historical rival Japan so that Japan did not become more militaristic. This is to be expected in some regards since China is opposed to Japan’s BMD generally, and because it could provide added protection from Chinese

⁵⁹⁰ See the worksheet entitled “Monadic Monthlies.”

⁵⁹¹ See the worksheet entitled “JPN>PRK.”

⁵⁹² This stems from the dissertation’s database.

⁵⁹³ See the section entitled, “Japan for Kim Jong-il.”

ballistic missile attack against Taiwan (Swaine, Swanger, & Kawakami, 2001).⁵⁹⁴ There also exists economic competition between China and Japan, as well as territorial disputes that include significant energy reserves. So, there seems to be ample support to explain the statistically significant positive PRC behavior toward North Korea. However, the coefficient estimate is very modest, suggesting a small effect on North Korean behavior toward Japan. As described above, PRC behavior affected the statistical significance of the TD-1 BMD variable in the positive model; all other BMD variables remained unchanged (i.e., neither lost nor gained statistical significance) in the remaining models.

Positive & Negative South Korean (ROK) Behavior toward North Korea.

It was difficult to predict the effect of the ROK variables upon North Korean behavior toward Japan since ROK and Japan have not had a close relationship despite sharing a common ally (U.S.). But neither the cultural connections between South and North, nor cooperative policies toward the North, such as the Sunshine policy had any statistical significant effects upon North Korean behavior toward Japan in either model (Table 3 or 4). It appears the dyadic interaction between the two Koreas may not contribute to any North Korean behavior to Japan. ROK behavior did not have any significant effect on any of the BMD variables (i.e., neither lost nor gained statistical significance) in any of the positive or negative models.

Political Rapprochement.

Despite the heightened cooperative interaction in the late 1990s and early 2000s, the rapprochement variable that overlapped specific BMD-related periods (“Rapprochement 2000”) did not have a statistically significant effect on cooperative North Korean behavior. It did, however, work to *decrease conflictual* North Korean

⁵⁹⁴ See pages 79-80.

behavior toward Japan (-4.43**), as seen in Table 4 (Model 6). As described in the discussion above (TD-1 variable), rapprochement appeared to affect the statistical significance of the TD-1 BMD variable in the cooperative model (further tests indicate TD-1 was statistically significant);⁵⁹⁵ all other BMD variables remained unchanged (i.e., neither lost nor gained statistical significance) in the remaining models. So, while it was expected that the rapprochement dynamic would have an effect on North Korean behavior, it was not known the direction (+/- sign) the behavior would take or its intensity. In this case, the interesting result of the analyses is not the lack of additional cooperative behavior (statistically) but the reduction of North Korean conflictual behavior, suggesting it did more to mollify the North from its coercive strategy, at least to some extent and for a period of time. The political rapprochement opportunities were seriously set back, however, when Japanese domestic and governmental reactions to North Korea's admission to a wider array of Japanese abductions were negative (Events Data 1990-2011, 2012).⁵⁹⁶ As with the 1998 TD-1 launch, this admission may have represented another miscalculation by North Korea's leadership in underestimating the domestic sensitivities of these issues within Japan.

Further, between the two summits, North Korea in rapid succession displayed significant conflictual behavior toward Japan and others: on 10 January, 2003 it announced the state's withdrawal from the Treaty on the Non-Proliferation of Nuclear Weapons (commonly referred to as the NPT); in February, and again in March, 2003 it conducted short-range ballistic missile tests, with the missiles impacting into the Sea of Japan; and, on 19 March, 2003, North Korea's leadership indicated the state may no

⁵⁹⁵ See "Multicollinearity" below.

⁵⁹⁶ See the worksheet entitled "JPN>PRK."

longer adhere to a long-range ballistic missile test moratorium (Events Data 1990-2011, 2012).⁵⁹⁷ These were very troubling indicators for Japan, especially having experienced over two years of cooperative interaction with North Korea. This period included a positive note with the first round of the Six-Party Talks in late August, 2003 (Events Data 1990-2011, 2012),⁵⁹⁸ a political process in which Japan formally participated in order to address the North Korean threat (especially its emerging nuclear weapons capability, though the abduction issue was never far from Japan's interests).

Political Parties.

The role of political party did not tend to make much of a difference. In fact, the periods of rapprochement between Japan and North Korea occurred while Japan's more conservative party, the LDP, was in power. Though in power for many years, the LDP was considered to be very cautious in terms of Japan's national security interests. It is possible that part of the drive for interaction with North Korea had more to do with Prime Minister Koizumi's personal approach, perhaps seeking a solution with North Korea at a time when Japan's ability to absorb the financial compensatory costs would be less painful, or possibly even for reasons of personal image or legacy. The "US GOP" variable's coefficient estimate as statistically significant (+2.03**) is more difficult to explain. It would appear to be anomalous to the other two political parties (which did not prove statistically significant) as well as the cooperative U.S. dyadic behavior toward North Korea ("Positive US>NK") which one would expect to share results if either was statistically significant. But these were not the case. It is possible that because the GOP period overlapped Japan's rapprochement activities in the 2000s some partnering

⁵⁹⁷ See the worksheet entitled "JPN>PRK."

⁵⁹⁸ See the worksheet entitled "JPN>PRK."

between the U.S. and Japan in relations with North Korea help explain the statistical significance. However, in comparing the U.S. and Japanese cooperative and conflictual behavior toward North Korea during this period, it appears their interests occasionally diverged. Also, as described in the discussion above (TD-1 variable), the political parties affected the statistical significance of the TD-1 BMD variable in the cooperative model; all other BMD variables remained unchanged (i.e., neither lost nor gained statistical significance) in the remaining models.

Tests and Diagnostics

All of the variables in both Table 3 and Table 4 assessed to be significant with their respective coefficient estimates were supported with significance testing both through proving statistically significant at the .05, two-tailed level and having t-ratios above 2.0 in value.⁵⁹⁹ Further tests for autocorrelation and multicollinearity were also conducted.

Autocorrelation.

Of the 14 regression models, all had Durban-Watson statistical values approximately 2.0, the value used for identifying potential serial correlation (autocorrelation). Autocorrelation problems within the dependent variable of the regression models can arise, especially models using time-series data like the dissertation database. The dependent variable may produce a lagging effect captured in other data related to the dependent variable later in the data. Time-series models, therefore, can be more susceptible to autocorrelation and distort analysis. Since about half of the models had Durban-Watson values slightly less than 2.0 (ranging from 1.89 to 1.95), further

⁵⁹⁹ Lewis-Beck (1980) suggests these two significance testing parameters offer a good “rule of thumb” for assessing variable coefficient statistical significance. Page 52.

testing was conducted to analyze serial correlation of the dependent variable in the models. All but one of the models with Durban-Watson values less than 2.0 were within the models analyzing *positive* North Korean behavior toward Japan—models which also had higher R^2 values than the models which analyzed conflictual North Korean behavior toward Japan. The possibility existed that part of the explanation for higher R^2 results for the cooperative models was a serially correlated dependent variable emerging in the regression analyses.

Table 5: Tests for Autocorrelation among Model Variables

<i>Model</i>	<i>Durban-Watson Statistic</i>	<i>dL Critical Value</i>	<i>dU Critical Value</i>
Positive (1)	1.89	1.77344	1.82010
Positive (2)	1.91	1.74173	1.85222
Positive (3)	1.90	1.72561	1.86867
Positive (4)	1.95	1.72561	1.86867
Positive (5)	1.91	1.72561	1.86867
Positive (6)	1.90	1.72561	1.86867
Positive (7)	1.94	1.71747	1.87699
Negative (1)	1.94	1.77344	1.82010
Negative (2)	2.03	1.74173	1.85222
Negative (3)	2.00	1.72561	1.86867
Negative (4)	2.04	1.72561	1.86867
Negative (5)	2.04	1.72561	1.86867
Negative (6)	2.06	1.72561	1.86867
Negative (7)	2.05	1.71747	1.87699

Critical values include the *Constant* variable for testing purposes: Models (1) include 4 variables; Models (2) include 8 variables; Models (3) include 10 variables; Models (4) include 10 variables; Models (5) include 10 variables; Models (6) include 10 variables; Models (7) include 11 variables. Note that the database sample size was $n = 264$, but the critical values provided both by *gretl* and Stanford's tables develop critical values for sample sizes in increments of 10 (i.e., 250, 260, 270, etc.); 260 was selected as the sample size provided in the tables closest to the actual (264) sample size in the database used for the dissertation regression analyses.

To test for autocorrelation one can either use Durban-Watson and “critical values” comparative testing, or conduct separate, lagging-variable regression. For the dissertation's models used, the test for autocorrelation was done by using “critical values” provided for Durban-Watson testing. Critical values are two figures which

provide statistical indications whether serial correlation of the dependent variable may exist. These testing values are derived using the sample size for time-series analysis and the number of regressor variables used in each model. The sample size for this testing was determined to be 264, which corresponded to the number of months (12 months X 22 years) in which data were provided in the database. The critical values used for the Durbin-Watson statistical tests were obtained from within the *gretl* software, and also cross-checked using formal critical values tables provided by Stanford University among their statistical analysis online resources (Stanford University). One critical value is a lower “dL” figure; the other is an upper “dU” figure. The regression model’s Durban-Watson statistical score is compared to the critical values: if the Durban-Watson score is higher than the dU value, then no serial correlation is present; if it is below the dL figure, then there exists a good possibility that serial correlation is present, warranting further testing, such as inclusion of a lagged dependent variable; if the Durban-Watson score is between the two critical values, then the results are not conclusive. The results are seen in Table 5, reflecting no serial correlation of the dependent variable in any of the models.

Multicollinearity.

Tests were also conducted for multicollinearity for some models, where a high correlation among independent variables was possible. In such cases, the overall models are likely accurate, though the validity of the predictive power of statistically significant independent variables may be reduced. The most common error that could create conditions of multicollinearity is the improper use of dichotomous independent variables for coverage of particular time periods in time-series analyses. In this case, dichotomous variables are created that cover the entirety of the periods in the database sample size

(i.e., 264 months in the case of the dissertation's database), thus creating a condition in which no period is excluded for statistical comparison. Models 2 through 7 used in both cooperative and conflictual North Korean behavior toward Japan (Tables 3 and 4) used time-based dichotomous variables pertaining to key Japanese decision points or behavior periods relating to their BMD program; however, all models excluded the period January, 1990, through August, 1998, of the database sample (a period of minimal Japanese BMD related activity). This exclusion was purposely designed to avoid risks of multicollinearity in the various regression model analyses. However, statistically significant coefficient estimates resulted in model analyses for three dichotomous independent variables, so further testing was done to address possible multicollinearity in the models, especially those variables with significant coefficient estimates.

This further testing was done where models analyzing cooperative North Korean behavior (Table 3) reflected consistently higher R^2 values (though independent variable coefficients were generally not significant), and models analyzing conflictual North Korean behavior (Table 4) reflected significant independent variable coefficients that were significant but in opposite directions (one positive, one negative). Both of these conditions indicate possible multicollinearity among independent variables.

For example, multicollinearity could have been present in negative models where the dichotomous variable dealing with the start of operational deployment of Japan's BMD system ("J Deploys") consistently has a positive (+) and statistically significant coefficient estimate while the variable indicating the period when for the first time Japan actually fielded BMD prior, and in response, to North Korean preparations in early 2009 to launch a Taepodong missile ("TD-2") consistently has a negative (-) and statistically

significant coefficient estimate. As mentioned above, the variables did not wrongly include time variables for the entire data sample, so further tests were conducted in *gretl* for the statistically significant variables. In this case, *gretl* uses a Variance Inflation Factors (VIF) test where dichotomous independent variable values >10.0 indicate a collinearity problem. However, both the “J Deploys” and “TD-2” variables were well below 10.0 (both scored 2.187), indicating no problem existed with these variables.

Secondly, this same test was conducted in *gretl* against the statistically significant variables in the cooperative models. This test included the dyadic interaction variable capturing cooperative Japanese behavior toward North Korea (“Positive J>NK”) and the dichotomous variable representing Japan’s significant decisions regarding BMD research and investment in late 1998 following North Korea’s Taepodong missile test that surprisingly flew directly over Japan (“TD-1”). These two variables indicated very low VIF scores of 1.015, indicating no problems of variable collinearity. Overall multicollinearity testing was conducted also since the positive models achieved higher R^2 values than the negative models (see Table 6). When testing was done with a much larger model (adding five more variables including two more dichotomous variables), individual VIF scores likewise remained low (ranging from 1.188 to 2.512) and well below the 10.0 VIF values. Further, the two variables with statistically significant coefficient estimates in this model scored very low (“Positive J>NK” scored 1.188, “TD-1” scored 1.541). However, the cumulative VIF score for all variables combined in the model was 11.916, exceeding the 10.0 VIF value. This, however, includes eight variables (including Constant) and it is possible the large number of variables explains the higher

overall VIF at the “model” level. As indicated in Tables 3 and 4, analysis was conducted using a reduced set of independent variables to avoid the problem of VIF inflation.

A second test for multicollinearity was conducted in *gretl* through construction of a correlation matrix of all 18 independent variables. This test included 153 variable combinations; only three variable pairs indicated potential for multicollinearity. The three combinations included: “TD-2” and “J Deploys;” “Rapprochement 2000” and “TD-1” and, “LDP” and “TD-2.”⁶⁰⁰ The “TD-1” variable was the only one that had a significant loss of statistical significance (Table 3, Model 6) among the three pairs identified in the correlation matrix with potential multicollinearity (the “Deploy” and “TD-2” variables showed consistent coefficient estimates across models in both Tables; no further analyses were conducted).⁶⁰¹ Further regression analysis was conducted to assess the effect upon “TD-1” when the “Rapprochement 2000” variable was removed. In this case, “TD-1” reflected a statistically significant coefficient estimate comparable to that of Models 2, 3, and 5 in Table 3 (2.70** coefficient estimate; 2.27 t-ratio).

Table 6 provides an overview of R^2 values for all models used for regression analyses. The R^2 , or coefficient of determination, represents the proportion of variance in the data explained by, or correlated with, a model. It provides an approximation of how well a model fits the data and possibly predicts variance of the dependent variable using a given model.

⁶⁰⁰ A correlation coefficient absolute value of 0.70 was used as the threshold for potential variable collinearity; the correlation coefficients for all three of these pairs are only modestly above this value: “TD-2” and “J Deploys” (+0.74); “Rapprochement 2000” and “TD-1” (+0.75); and, “LDP” and “TD-2” (-0.74).

⁶⁰¹ The P-value (F) model-level scores were checked in the various models for “Deploy” and “TD-2;” no significant variation was evidenced in either adjusted R^2 scores or the P-value (F) scores.

Table 6: R² Values for all Models

<i>Model</i>	<i>R²</i>	<i>Model</i>	<i>R²</i>
Positive (1)	.60	Negative (1)	.35
Positive (2)	.61	Negative (2)	.38
Positive (3)	.61	Negative (3)	.39
Positive (4)	.62	Negative (4)	.39
Positive (5)	.61	Negative (5)	.38
Positive (6)	.61	Negative (6)	.39
Positive (7)	.62	Negative (7)	.39

Models (1) include 4 variables; Models (2) include 8 variables; Models (3) include 10 variables; Models (4) include 10 variables; Models (5) include 10 variables; Models (6) include 10 variables; Models (7) include 11 variables. Note that the database sample size was n = 264.

Conclusions

The analyses above seem to indicate that Japan's BMD created both cooperative and conflictual North Korean behaviors toward Japan, consistent with the missile defense-deterrence literature. For example, Japan's BMD program during the TD-1 period had a positive effect upon North Korean cooperative behavior toward Japan, suggesting Japan's BMD *strengthened deterrence* against North Korea. Japan's BMD, when employed operationally during the TD-2 period reduced North Korean conflictual behavior toward Japan, also suggesting Japan's BMD *strengthened deterrence* against North Korea. However, Japan's BMD during the initial Japan Deploys period increased conflictual North Korean behavior toward Japan, indicating the initial deployment of Japan's BMD *undermined deterrence* against North Korea. Results, therefore, indicated varied BMD deterrence effectiveness.

The hypothesis of increasingly conflictual interaction between North Korea and Japan given their historical interaction, however, was not reflected in the analyses. Significant cooperative interaction is revealed in the data and analysis and the patterns of interaction do not appear to yield large swings of either *reductions* to cooperative North

Korean behavior toward Japan or increases to *conflictual* North Korean behavior toward Japan. BMD does not appear to be a contributor to any worsening of the Japan-North Korea relationship generally. Japan's BMD did, however, appear to be correlated with favorable shifts in provocative and coercive North Korean behavior toward Japan with ballistic missiles in the later (TD-2) period.

The hypothesis that a dominant U.S. would ultimately affect North Korean behavior toward Japan did not appear to be supported by the analyses addressing the cooperative and conflictual U.S. behavior toward North Korea. None of the models with U.S. behavioral variables reflected statistical significance in affecting either cooperative or conflictual North Korean behavior toward Japan, nor did they change any of Japan's BMD-related variables in any significant way.

Lastly, the hypothesis that China's influence with North Korea would affect the North's behavior toward Japan seems to be supported with the analyses. This was reflected most clearly with cooperative PRC behavior toward North Korea indicating an increase in North Korea's cooperative behavior toward Japan. Cooperative Chinese action toward North Korea, possibly including inducements, predictably strengthened North Korea's cooperative interaction with Japan. Such an outcome would generally support China's strategic interests. China's positive influence also appears to have reduced the effect of Japan's BMD in the TD-1 period.

Japan's BMD

The period immediately following the historic 1998 Taepodong missile launch over Japan was statistically significant, and in a *positive* direction. But while Japan's BMD, other than the TD-1 variable, did not correlate in significant positive ways

statistically, neither did BMD reflect a reduction in cooperative behavior (i.e., make the positive relationship between the two worse). It is an important feature of any aspect of a BMD program to correlate to an increase in cooperative behavior from an adversary. The implication of Japan's efforts with BMD in the TD-1 period is that Japan's BMD *strengthened deterrence* against North Korea. Further, given the expectations of significant reductions in political relations, and the fact that one would expect bad relations anyway due to their history, it could be noteworthy that the positive relations did not deteriorate with the unfolding of Japan's BMD program over time.

The dyadic-interactive correlation with *negative* North Korean behavior toward Japan (Table 4) also seemed to carry over into Japan's BMD in two ways: the "Deploys" variable and the late-timeframe "TD-2" variable. The coefficients for these variables have opposing directional signs (+/-). The TD-2 variable addresses the period when Japan not only deployed BMD to intercept North Korean missiles in 2009, but also reflects changes to North Korean missile testing patterns that were less provocative toward Japan. Since "Deploy" occurred prior to the "TD-2" variable, it is possible "Deploy" did correlate to early North Korean reactions to Japan's new BMD deployments and North Korea was constrained from ballistic missile coercion against Japan by the time of the 2009 missile flight test—Japan's BMD *strengthened deterrence* against North Korea. This is consistent with the "-" sign for the TD-2 coefficient, meaning Japan's BMD reduced North Korea's conflictual behavior somewhat toward Japan.

Table 7: Distribution of Data with BMD Terms by Time Period

	<i>Pre-TD-1</i> (1/90-8/98)	<i>Post-TD-1</i> (9/98-11/03)	<i>Decides</i> (12/03-2/07)	<i>Deploys</i> (3/07-1-09)	<i>TD-2</i> (2/09-12/12)
No. of Reports	25	185	204	19	45
Percentage	5	39	43	4	9

There were 478 total reports throughout the 22 years of monthly data in the dataset. These data represent only Japan-toward-North Korea dyadic behavior.

Within the “TD-1” variable’s timeframe, much of the political interaction between Japan and North Korea regarding rapprochement took place (Figure 4), which might have helped explain the cooperative interaction between the two states and the high R^2 for positive models generally. If this were true, then one would also expect the “J Decides” variable to reflect positive correlation in the cooperative models, since positive political events also occurred during this period, including the second summit in early 2004. However, the “J Decides” variable did not reflect statistical significance in any models. Further, the number of BMD-related reports in the Japan-toward-North Korea data (Table 7) was very high during the “TD-1” period, suggesting BMD was highly operative even while separate rapprochement talks occurred.

It is also possible that the statistically significant correlation of “J Deploys” to conflictual North Korean behavior toward Japan (Table 4) across the models was partially the result of other economic and political interaction. These include: the stalling of Japan-North Korea bilateral talks in March, 2007; Japanese anger on 15 October, 2008 over U.S. removal of North Korea from its list of state-sponsors of terrorism; and, Japan’s internal public debates in April, 2009 over adding new sanctions against North

Korea (Events Data 1990-2011, 2012).⁶⁰² On the other hand, cooperative interactions also occurred: resumption of talks between Japan and North Korea on 6 June, 2008; and, several reports of Japan's decision to lift some sanctions against North Korea in June, 2008. As a result, it appears unlikely these interactions explain the statistical correlation of the "J Deploys" variable with conflictual North Korean behavior toward Japan. Additionally, while the number of reports with BMD terms in this period is lower than the previous two BMD-related time periods (see Table 7), it should also be noted that the overall number of cooperative and conflictual behavioral dyadic data from Japan toward North Korea in their period also dropped by nearly 70% from the previous period ("J Decides").

Lastly, the "TD-2" variable, which was statistically significant in *reducing* conflictual North Korean behavior toward Japan in five of six models, could also be explained should there be other significant reductions in negative activity or significant cooperative interactions during this period. However, there is no evidence of either types of interaction in the data in this period. The TD-2 launch occurred on 5 April and North Korea conducted a second nuclear test on 25 May, 2009. While Japan reacted publicly to the TD-2 launch in a negative way, the number and intensity for the TD-2 and nuclear tests were noticeably lower than previous events—about 80% lower than the 2006 multiple ballistic missile launches and first nuclear test. At the same time, however, the number of BMD-related reports increased from the previous period (see Table 7). Further, none of the other independent variables analyzed in the negative models, which could offer some alternative explanation, had statistically significant coefficient estimates (Table 4).

⁶⁰² See the worksheet entitled "JPN>PRK."

Surprisingly, the role of the U.S. was not significant statistically in any of the models. This was not expected due to the historically dominant role of the U.S. in Northeast Asia regional affairs. However, it is also possible that greater autonomy on the part of both North Korea and Japan played a role in weakening the potential impact of U.S. behavior. For North Korea, autonomy describes its loss of tether from the Soviet Union when the Cold War ended; its need to act independently—often against the intentions of the international community; sometimes against the wishes of its closest ally, China—in part explains its hardened positions, whether ideologically or militarily. The North’s pursuit of an extensive ballistic missile capability, strengthened by a WMD capability, has diminished somewhat the influence of the U.S. and others. Japan, too, has become increasingly autonomous from the U.S., possibly explaining the gap in statistically significant U.S. effect, at least in these BMD-related models.

In summary, some of the BMD variables were affected in some of the models by the other independent variables: the TD-1 variable lost statistical significance in two⁶⁰³ of six positive models (no statistical change in negative models); the Japan Decides variable saw no statistical change in any of the models; likewise, the Japan Deploys variable saw no statistical change in any of the models; and, the TD-2 variable lost statistical significance in one conflictual model (no statistical change in cooperative models). So, for the 48 total BMD-related models, 94% were not statistically affected (i.e., neither lost nor gained statistical significance) by any of the other independent variables considered in the cooperative and conflictual models. This suggests relative strength of the BMD-related variables in the models considered.

⁶⁰³ While Table 3 reflects loss of statistical significance in Model 6, further tests (described above under “Multicollinearity”) indicated “TD-1” was statistically significant in regression modeling when the “Rapprochement 2000” variable was removed.

Table 8: Goldstein Conflictual-Cooperation Event Scale

WEIS Event Type	Weight/Intensity
Military attack; clash; assault	-10.0
Seize position or possessions	-9.2
Nonmilitary destruction/injury	-8.7
Noninjury destructive action	-8.3
Armed force mobilization, exercise, display; military buildup	-7.6
Break diplomatic relations	-7.0
Threat with force specified	-7.0
Ultimatum; threat with negative sanction and time limit	-6.9
Threat with specific negative nonmilitary sanction	-5.8
Reduce or cut off aid or assistance; act to punish/deprive	-5.6
Nonmilitary demonstration, walk out on	-5.2
Order person or personnel out of country	-5.0
Expel organization or group	-4.9
Issue order or command, insist, demand compliance	-4.9
Threat without specific negative sanction stated	-4.4
Detain or arrest person(s)	-4.4
Reduce routine international activity; recall officials	-4.1
Refuse; oppose; refuse to allow	-4.0
Turn down proposal; reject protest, demand, threat	-4.0
Halt negotiation	-3.8
Denounce; denigrate; abuse	-3.4
Give warning	-3.0
Issue formal complaint or protest	-2.4
Charge; criticize; blame; disapprove	-2.2
Cancel or postpone planned event	-2.2
Make complaint (not formal)	-1.9
Grant asylum	-1.1
Deny an attributed policy, action, role or position	-1.1
Deny an accusation	-0.9
Comment on situation	-0.2
Urge or suggest action or policy	-0.1
Explicit decline to comment	-0.1
Request action; call for	-0.1
Explain or state policy; state future position	0.0
Ask for information	0.1
Surrender, yield to order, submit to arrest	0.6
Yield position; retreat; evacuate	0.6
Meet with; send note	1.0
Entreat; plead; appeal to; beg	1.2
Offer proposal	1.5
Express regret; apologize	1.8
Visit; go to	1.9
Release and/or return persons or property	1.9
Admit wrongdoing; apologize, retract statement	2.0
Give state invitation	2.5
Assure; reassure	2.8
Receive visit; host	2.8
Suspend sanctions; end punishment; call truce	2.9
Agree to future action or procedure, to meet or to negotiate	3.0
Ask for policy assistance	3.4
Ask for material assistance	3.4
Praise, hail, applaud, extend condolences	3.4
Endorse other's policy or position; give verbal support	3.6
Promise other future support	4.5
Promise own policy support	4.5
Promise material support	5.2
Grant privilege; diplomatic recognition; de facto relations	5.4
Give other assistance	6.5
Make substantive agreement	6.5
Extend economic aid; give, buy, sell, loan, borrow	7.4
Extend military assistance	8.3

CHAPTER EIGHT: CONCLUSIONS

In conducting the research concerning whether Japan's BMD deterred North Korean behavior, analytic results and insights were gleaned not only pertaining to the primary question under consideration, but also pertaining to (1) the implications of the Japan-North Korea deterrence relationship for the future; and (2) insights into deterrence-related theoretic issues. Details of the BMD-specific findings, using the mixed-methods approach, can be found in Chapter Seven: Quantitative Analysis. However, considerable qualitative data was also incorporated to understand those findings. Having provided those analytic details in Chapter Seven, the emphasis in this chapter will be upon potential challenges in Japan's future security environment and revisiting a few of the theoretic issues. Appendix 2 is also provided to further the theoretic discussion. It applies the findings of the dissertation's central question to the various missile defense-deterrence theoretic arguments identified in Chapter Three.⁶⁰⁴

Japan's BMD: Effects & Motivations

The qualitative and quantitative analyses suggested Japan's BMD influenced North Korean cooperative and conflictual behavior toward Japan in some periods. None of these analyses demonstrate decisively that Japan's BMD *caused* change in North Korean behavior, but suggest it is possible Japan's BMD had deterrent effects in some cases. Further, the level, or amount, or intensity of deterrent behavioral effects under general deterrence conditions were most likely modest effects. However, even modest effects could help in widening the difference between general deterrence and crisis in the Japan-North Korea relationship. Deterrence effectiveness analysis, especially within general deterrence conditions, can only meet modest expectations; it cannot prove an

⁶⁰⁴ See page 339.

adversary was influenced by certain variables with certainty. This is problematic, however, even in operationalizing failures to deter war unless the adversary leader explains his calculus openly after the act; few do.⁶⁰⁵ Instead, deterrence analysis permits inferences using, for example, the mixed-methods approach described in the dissertation. These methods did, however, offer ways to approach deterrence analysis under general deterrence conditions, in context of the Japan-North Korea regional relationship that is often forgotten, and regarding a capability (BMD) that has deterrence effects that require better understanding.

Throughout the BMD program's development over time, the commitment, or stake of Japan's leadership progressed from an emphasis on the technical aspects of effective BMD in the early TD-1 phase, to the commitment to be one of the world's few nations with a national BMD system in the Decide period, to the organization and equipping of its military arm with operational BMD interceptors in the Deploy period and, finally, to its political willingness to use its operational BMD system if needed during the TD-2 event period. Each step along the way, each decision point, involved political risk for Japan's leaders, both domestically and in the region. However, if there was any sort of a "peace dividend" in which Japan could share following the end of the Cold War, that began to fade during the 1990s as North Korea showed itself to be a continuing threat and it completely evaporated with the 1998 TD-1 launch over Japan. In addition, Japan's stake in providing for its own defense was shaped by other factors that

⁶⁰⁵ One exception was Iraq's former president Saddam Hussein who, after his capture, revealed to interrogators he had "miscalculated" in 2003, believing the U.S. would not invade. See: (CNN, 2008).

solidified Japan's *strategic* choices for a good, formidable BMD program as it considered the totality of its security position.⁶⁰⁶

First, Japan has steadily grown more autonomous from the U.S. since the end of the Cold War.⁶⁰⁷ The alliance with the U.S. remains, but Japan has become more politically independent with regard to North Korea, in part due to Japan's stronger

⁶⁰⁶ Using various modeling techniques of various North Korean ballistic missile attack scenarios, Douglas Diehl created a prioritized defended asset list (DAL). The criteria he used (including criticality, vulnerability, reconstitutability, and threat) are those used in air defense planning and ascribe value to U.S. and allied targets based on "their obvious political or military significance." He then applied various defending strategies using THAAD, Patriot, and Aegis interceptors to simulate through computer modeling North Korean ballistic missile attacks on valued targets. Attacks on Japan included Scud-C attacks on Sasebo and Nodong-1 attacks on Okinawa, Tokyo, Yokosuka, Atsugi, and Misawa military and political locations. Diehl's most pressing insight was the value of secrecy in the deployment locations of BMD – reducing expected damage to U.S. and allied high-value targets to 0.93 (e.g., a probability that about 1/10th of a missile "leaking" through the defensive network), or roughly a six-fold improvement over similar attacks with missile defense locations transparent to the attacker (Diehl, 2004). See pages 20-4 and 31-6. The result is that North Korea, with perfect knowledge of BMD systems and locations would be significantly thwarted from achieving operational objectives, but even political objectives could be denied if BMD locations were withheld from the North Korean leadership. In both cases, North Korean outcomes would be affected which could influence, perhaps decisively, their decisions to conduct attacks against defended targets in the first place. See also: Joshua Epstein (Epstein, 1985), pages 1, 14, and 21-2; and, (Risk Management: Concepts and Guidance, 1989), pages 4-9.

⁶⁰⁷ In his excellent review of Japan's emerging policy toward North Korea in approximately the first decade following the end of the Cold War, David Fouse argues friction between Japan and the U.S. in the post-Cold War era was a contributor to Japanese autonomy in its relations with North Korea. This friction began as early as 1990 with the surprise "Three-Party Declaration" signed in Pyongyang on 28 September, 1990 among Japanese and North Korean legislative groups. The meetings were not a surprise, but calling for diplomatic relations to be established, a Japanese apology to be issues, and plans for financial compensation for 81 years of Japanese-caused sufferings upon the North Korean people were far more than the Japanese executive had expected. This also surprised the U.S. and South Korean governments who were particularly concerned over the level and timing of potential Japanese reparations—estimated in the billions of dollars. More serious, Fouse argued, was the 1994 nuclear stand-off with North Korea which included U.S. requests for basing access for military action being planned against North Korea, as well as U.S. requests for Japanese armed participation in a proposed naval blockade. Japan was simply unprepared for such a short-notice request upon its rather rigid postwar constitutional system and, ultimately, could not support the U.S. contingency planning. Further, "diverging perceptions" regarding the threat from North Korea, coupled with the 1998 TD-1 launch over Japan which strengthened public support for greater Japanese regional activism, helped push Japan into greater autonomy (Fouse, 2004); see pages 3-4 and 12. Greater Japanese autonomy does not infer independence from U.S. policy; it does, however, suggest acceptance of increased responsibilities for its own defense and, perhaps, a measure of Japanese pride. In addition, these disparities in Japan-U.S. policy and the resulting Japanese autonomy relate the assumption in the dissertation that Japan's relationship with North Korea, though certainly not insulated from interaction with other regional actors, can and should be analyzed on its own bilateral political merits, including the role of BMD as part of the security dimension of that overall political relationship.

position economically, as well as its improved military capabilities and willingness to use them. Japanese apologies for decades-old imperial sins have increasingly been complimented with incremental changes to Japan's postwar pacifist constitution, including changes with regard to its BMD program. Second, the overall threat from North Korea and its ballistic missiles, potentially armed with WMD, has risen. This was punctuated by the 1998 TD-1 flight over Japan, but other events, too. Third, Japan's confidence in the U.S. as its security sponsor and wartime guarantor has eroded. This was most likely the result of repeated U.S. failures to deter North Korean development of nuclear weapons, but also U.S. nuclear force reductions over the past two decades, including tactical nuclear weapon removal from South Korean territory and deep cuts in strategic nuclear weapons. Fourth, North Korean coercive strategies aimed at regional actors, including Japan, are based upon North Korea's ballistic missiles and exist below the threshold of U.S. extended deterrence guarantees, creating a significant void for Japanese security under general deterrence or sub-conflict conditions. Lastly, while the "clear and present danger" in Japanese threat perceptions stem from North Korea, longer-term challenges are seen on the horizon with China. A clash is possible, sparked perhaps by economic competition and disputes over energy-rich islands. Japan is well aware that China's ballistic missile capability is steadily growing in number, advanced technology, and range. This security concern and others are addressed in the next section.

Outlook for the Future

North Korea

The near-term security concern for Japan continues to be the threats from North Korea and how those threats might evolve under a new leadership. North Korean strategy

changed since the end of the Cold War from one of confrontation over final victory of the Korean War to one of deterrence and coercion to support long-term political goals. This change was reflected in policy choices to place the massive conventional arm in a more defensive posture, to decline and allow its benefit-denial deterrent effect, though still formidable, also to diminish. As the conventional arm of the strategy of confrontation declined the nuclear and ballistic missile arm grew in numbers with modest technological growth as well. Still reflecting an overall deterrence posture, the role of ballistic missiles in particular also served to replace confrontation with a coercive strategy to pressure external actors, including Japan, to cooperate with North Korean wishes and, at the very least, to respect its independence and sovereignty. It remains to be seen, however, whether the North will remain on this path to buy time and hedge against political uncertainties or pursue a divergent one.

On the peninsula, the conventional military balance of power is changing. The ROK military is now the seventh largest in the world (the North's is ranked sixth largest) and is equipped with modern armaments, high technologies, and highly-trained and educated personnel (Lee & Hamre, 2011).⁶⁰⁸ Further, South Korea announced the creation of a missile defense command to address the North Korean ballistic missile threat (Agence France-Presse, 2006).⁶⁰⁹ One conclusion might be that the North Korean threats particularly to ROK through violent provocations in the past 2-3 years are due to North Korean perceptions of declining value of their missiles to coerce and threaten ROK in light of ROK's decisions to pursue advanced BMD systems capable of engaging shorter-range missiles. Such BMD, including Iron Dome-like systems employed by the

⁶⁰⁸ Page 3.

⁶⁰⁹ But the South did not respond with such vigor until after the 2006 North Korean ballistic missile tests, whereas Japan began in late 1998.

Israelis, might be pushing North Korea to push with increasingly violent actions to achieve political and military objectives before ROK can more effectively defend itself against North Korean short and medium-range missiles. While the ballistic missile threat to South Korea, given its proximity to the North—especially the South Korean capital of Seoul—is different from Japan's there may be lessons from the Japan-North Korea BMD case applicable to South Korea, though this is perhaps a topic for future study.

Regime collapse in North Korea could occur with little warning, as has happened in other states in modern history. To date, however, North Korea has defied the projections of most who venture into future predictions. Victor Cha, for example, argued 10 years ago that North Korea was preoccupied with avoiding collapse, inferring even the North Korean leaders knew collapse was at hand. Others, such as Andrew Scobell, thought the North was more self-confident than that (Scobell, *North Korea's Strategic Intentions*, 2005).⁶¹⁰ Time appears to prove Scobell correct, which underscores the resiliency of the North Korean leadership, the regime, and the state. Scobell built upon his earlier position and, in his book on alternative futures of North Korea and prospects for collapse, suggested that, while there have been significant external and internal changes reflecting negative trends, others, more broadly, could be interpreted in a positive way (from the North Korean perspective). These positive factors (from the North's perspectives), suggesting immediate collapse would not happen as some predict (if not wish), included: priority upon diplomatic efforts to normalize relations with various parties; economic reform efforts in 2002; military strengthening at the strategic level, including ballistic missile and nuclear device tests; and positive demographic

⁶¹⁰ See pages 12-3, including footnote 42. In referencing Cha, Scobell was referring to *Nuclear North Korea: A Debate About Engagement Strategies* (2003), by Victor Cha and David Kang.

trends, including a rise in national life expectancy and population growth since 2003 (Scobell, *Projecting Pyongyang: The Future of North Korea's Kim Jong Il Regime*, 2008).⁶¹¹ These may have been interpreted by KJI as factors that tempered the other, more “desperate” indicators (i.e., famine, military decline, and economic stagnation) many analysts cite to infer KJI had all but lost control and the collapse of his regime in North Korea imminent. KJI may simply not have viewed his circumstances that way. Kim Jong-Un does not appear to be in fear of imminent regime collapse either and, having presided over missile and nuclear tests already, the prospects seem unchanged regarding North Korea and its overall strategy of coercion.

North Korean aberrant behavior and coercive use of ballistic missiles likely has had many audiences: internally, there were the elites of society, the military, the governmental organizations, and the people; externally, missile development and tests were aimed at all regional actors and to a lesser extent the UN. This approach satisfied many of the identity and cultural, internal and external environmental and personal psychological factors of value to North Korean leader decision-making. However, Japan’s sudden and significant press for BMD arguably affected KJI’s calculus, reflected in political cooperative engagement with Japan, such as summits on rapprochement and, later, changes in testing patterns, such as less threatening flight paths and construction of an entirely new missile test launch facility to fire missiles away from Japan proper. To be sure, North Korea could still satisfy many of his important decision-making factors through the use of this alternative test facility—the U.S. and ROK are still endangered by missile shots that skirt the western periphery of South Korean territory and U.S. forces

⁶¹¹ Pages 14-5. Scobell predicted a higher likelihood of continued regime survival with some gradual reforms to status quo.

located therein. Japan, however, is one important voice that is arguably in a different position and receiving fundamentally different North Korean activities of ballistic missile-supported coercion. It remains to be seen whether this North Korean strategy to cooperate with or acquiesce to Japan will continue to be both politically stable and less conflictual or violent, unlike more recent patterns of violence with South Korea. Regardless, it is possible Japan, through its BMD program, has succeeded in its deterrence strategy vis-à-vis North Korea in both a practical, operational way and in terms of permitting it to addressing longer-term considerations: political settlement with North Korea and adapting to the larger regional threat it faces with China.

Implications for Japan

General.

Japan's security position is shaped by many factors and forces, such as domestic politics and the strength of its economy. These are not uncommon considerations for democracies. Externally, however, Japan's position appears to be delicate, not only in terms of its relationship with North Korea, but China as well. Certainly Japan's relationship with the U.S. will remain important for Japan and how it views national security in the near-term and into the future. Japan's cooperative activities in BMD have strengthened its alliance with the U.S., for example. However, Hagstrom and Soderberg argue U.S. power has shown weakness since the 1990s—namely in its activities with Iraq, Iran, and North Korea—undermining the assumption of U.S. dominance in Northeast Asia to the point independent analysis of the Japan-North Korea relationship was not possible (Hagstrom & Soderberg, 2006).⁶¹² Unless U.S. policy toward North Korea moves significantly then the U.S. will matter much less in the North Korean

⁶¹² Pages 373-4.

calculus toward Japan. Victor Cha characterized it this way: "Strategic patience, strategic coma, whatever it is called, has allowed North Korea to patiently develop nuclear and missile programs" (Yonhap News Agency, 2013).⁶¹³ More generally, Michael Mazarr warns the recent and ongoing U.S. "pivot to Asia" could be "an unsustainable U.S. regional position." Instead, given the ongoing "post-primacy" position of the U.S. globally, he advocates the U.S. readjust its regional priorities and commitments in order to avoid triggering an inevitable "decline in perceived credibility of threats and promises" (Mazarr, 2012).⁶¹⁴ This illustrates the problem of expecting much, perhaps too much, from the U.S. under general deterrence conditions. To partially compensate, Japan appears to be strengthening its bilateral relations with key regional partners, including Australia, India, and South Korea.⁶¹⁵

The historical legacy of Japan's imperial occupation of Korea, and sustained distrust of Japan, persist and has political and significant security implications. Politically, this was seen recently in South Korean sentiments, and politics; not just those in North Korea. For example, an intelligence-sharing agreement, to be signed by leaders of the two countries, was cancelled only minutes prior being signed due to South Korean public outcry stemming from anti-Japanese sentiments over wartime treatment of Koreans (Herman, 2012). But fear and distrust run both ways. Japanese fears look ahead to the prospects of Korean unification. As Kaplan and Denmark maintain, Japan is well

⁶¹³ According to Cha, U.S. policy "has not been working and we need to do something else." The news article did not elaborate on any new ideas for U.S. strategy.

⁶¹⁴ Page 14.

⁶¹⁵ Ralph Cossa favored a "virtual alliance" between the U.S., Japan, and a yet-future reunited state of Korea, a prospect he suggests "inevitable" (Cossa, U.S.-Japan Relations: Building Toward a "Virtual Alliance", 1999); page 196. This idea was also voiced by others in light of the post-9/11 security uncertainties (Perry & Yoshihara, 2003); pages 180-1. James Schoff suggests trilateral cooperation for regional crises could be based on the PSI model (Schoff, 2005); pages 96-100.

aware of the deep historical sentiments across the region owing to its imperial legacy. They submit, “Indeed, Japan could be a big loser if Korea were to reunify. It is the prospect of a united Korean peninsula, as much as the growing might of China, which could lead to a strengthened and normalized Japanese military” (Kaplan & Denmark, 2011).

Japan-North Korea Relations.

With its BMD, Japan experienced some success in deterring North Korea’s coercive strategy against Japan that North Korea pursued through its underlying ballistic missile capability. This was the case not only theoretically but in practical North Korean behavior as well. What this essentially meant was that North Korean coercion toward Japan—to gain some sort of benefit from Japan or pressure Japan toward some new course of action—would need to rely upon some other instrument of coercion to be effective. But under general deterrence conditions or periods of provocation, what instrument could North Korea employ? Geographical distance favored use of ballistic missiles; however, some alternative is required for Japan to bend. North Korea’s conventional forces do not appear suited for this, although aggressive naval engagements could provide a means to influence Japan. But this, too, may no longer be effective as Japan’s anti-ship and anti-submarine warfare technologies and capabilities have improved. Cyber warfare could also be effective in an asymmetric way to pressure Japan.⁶¹⁶

⁶¹⁶ This could have utility for a North Korean coercive strategy against Japan; however, one of the main benefits of cyberwarfare is anonymity of the source of a cyber attack. If North Korea developed such capabilities beyond what they currently have today, their choice would be to overtly claim credit—which would likely enable Japan to safeguard its networks and counter North Korean cyber attacks with international pressure toward North Korea—or, deny its role in the cyber attacks and undermine their strategy altogether.

What are the prospects for future Japan-North Korea relations? One conclusion could be drawn simply by pointing to their long and divisive history. On the other hand, the post-Cold War period has not proven as bad as it could have been for Japan. Rapprochement still appears possible if conditions are right on both sides. But Japan's decision to acquire *its own* BMD in 2003 happened in the midst of a high level of rapprochement activity—and between the only two executive summits between Koizumi and KJI. If the climate for rapprochement worsened at the time of Japan's decision to acquire BMD, it rebounded in time for the second summit meeting in 2004. If the period of the 2009 TD-2 launch and following offers insights for the future it could be a greater North Korean willingness to refrain more from coercive activities against Japan and negotiate with Japan as it did in the early 2000s. If Japan's domestic political climate—and KJU, as the new leader in North Korea—are equally amenable to normalization then a period of cooperative interaction could follow. This would seem possible given the events of late 2012 and 2013: Unha-3 SLV satellite launch and third nuclear test (North Korea may feel it has demonstrated its strength with external audiences to increase the prospects of getting a deal. For the Japan-North Korea relationship, this would mean possibly a large monetary settlement with North Korea to compensate for Japan's imperial past. But should Japan seek mutual security guarantees of some sort, North Korea's willingness may require a broader settlement including formal conclusion of the Korean War and inclusion of other wartime participants such as the U.S., ROK, China, and Russia. Whether Japan can foster these conditions is questionable, increasing the possibility North Korea could up the coercive pressure on Japan for at least the war

reparations settlement. BMD will, under these conditions, most likely prove invaluable to Japan to strengthen its position, strengthen deterrence, or defend itself if necessary.

One could ask what the implications for deterrence would be should North Korea test launch another ballistic missile directly over Japan and its heavily populated areas including Tokyo. Would this be considered a failure of deterrence and undercut the value of Japan's BMD? Yes, it would, at least partially, but it needs qualification and will depend upon Japan's response, including how it employs its BMD in that situation. A North Korean launch in this manner is certainly more provocative than one flown south from Sohae. Such a launch may occur in an attempt to coerce Japan in some way, so part of the qualification is whether Japan chooses to use its BMD to shoot down the North Korean missile and whether Japan capitulates in some measurable way to the North Koreans. Engaging the missile would carry certain risks, including operational and domestic political fallout in Japan should the BMD system fail to do its job. Should this happen, North Korean resolve for future acts of coercion would be strengthened, not weakened. Successful engagement, but even trying to engage the North's missile, can have positive implications, too, such as a Japanese match of resolve and increasing confidence in future diplomatic negotiations or military activities beyond Japan's shores. It can also stem North Korean tendencies toward more or more dangerous future provocations over the long term and reinstate a preferable norm of bilateral stability. Conceptually, this alludes to the notion that how one defines deterrence, including what constitutes success or failure, is highly dependent upon the situation and the perspectives of the deterrer and the deterred. Existing narrow definitions, or clinging to those of the past, are ultimately less helpful to deterrence policy and planning than acknowledging the

realities of situation and perceptual nuance. This is particularly true of general deterrence conditions as the Japan-North Korea case demonstrates. This does not mean, however, that deterrence is unhelpful or unachievable, but only that one must manage expectations of it. The tendency toward overly simplistic deterrence-centric policy leads to seemingly obvious solutions which, in the case of deterrence, have a mixed track record and unintended consequences.

Japan-China Relations.

While North Korea remains the near-term security concern for Japan, China is emerging as not just an economic competitor but a military threat to Japan. According to J. Michael Cole, Japan's 2013 defense budget was predicated on five potential crisis or wartime scenarios. More importantly, "three of five scenarios explored by the defense ministry recently involve the Self-Defense Forces squaring off against the People's Liberation Army (PLA)" (Cole, 2013).⁶¹⁷ The scenarios with China included the disputed Diaoyu/Senkaku islands in the East China Sea and Chinese conflict with Taiwan. Further, it is interesting to note that in China's 2010 official defense paper more references were made to Japan than the United States and Taiwan combined (Full text: China's National Defense in 2010, 2011).⁶¹⁸ These security issues not only have implications for Japan's BMD but how Japan's thinking may be shaped regarding future military capabilities.

Even as Japan began its BMD research and development in earnest in the late 1990s, China, O'Donogue argued, perceived Japanese missile defenses to be highly destabilizing with respect to Taiwan. To China, the greatest threat is a legal or de facto

⁶¹⁷ According to the report, J. Michael Cole is a Taipei-based journalist who focuses on military issues in Northeast Asia and in the Taiwan Strait.

⁶¹⁸ Japan was referenced 13 times, United States 6 times, and Taiwan 5 times.

“freeze” of the territorial status quo of Taiwan, a political situation that could deny China its objective of reclaiming Taiwan. Since China’s primary instrument of coercion, like that of North Korea, is its large numbers of offensive ballistic missiles, Japanese partnership with Taiwan through the sale or transfer of BMD capabilities to Taiwan would be viewed as destabilizing if not threatening to China as such a significant change in the status quo could embolden Taiwan officials toward independence. Conflict between China and Taiwan could, therefore, pull in Japan and possibly the United States. Further, confidence in Taiwan could potentially trigger cascading effects in Tibet and Xinjiang toward autonomy and threatening the Chinese Communist Party itself (O'Donogue, 2000).⁶¹⁹ Finally, China continues to develop a wide variety of BMD countermeasures (Nuclear Threat Initiative (NTI), 2013).⁶²⁰

The ballistic missile threat to Japan from China was not imminent just 6-7 years ago (Kaneda, Tajima, Kobayashi, & Tosaki, 2007).⁶²¹ However, that has changed with implications for the future. China retains a vast ballistic missile arsenal (over 1,000) used for coercing Taiwan, but also possesses intermediate-range missiles capable of reaching Japan (Twomey, 2011).⁶²² With regard to the hundreds of Chinese ballistic missiles facing Taiwan, “Military analysts fear that the Second Artillery could retarget the missiles, putting Japan at risk, as well as America's Asian bases” (The Economist, 2010). According to Japan’s 2012 annual defense report, China’s DF-21, DF-3, and DF-4 all have sufficient range to threaten all or part of Japanese territory (Defense of Japan 2012,

⁶¹⁹ Pages 16-7.

⁶²⁰ See the section entitled, “Ballistic Missiles.”

⁶²¹ Page 43.

⁶²² Pages 63 and 71.

2012).⁶²³ According to the George C. Marshall Center, China has approximately 14-18 CSS-2 (DF-3) intermediate-range ballistic missiles (IRBMs) and 19-23 CSS-5 (DF-21) medium-range ballistic missiles (MRBMs) in its inventory “capable of striking Japan,” though it was suggested these missiles were more likely “targeted principally against Russian cities and military targets, to deter Russian interference in whatever China might want to do in the Pacific Rim” (The Chinese Scenario, 2012).⁶²⁴ In addition to the wartime threat from China, the general deterrence coercion threat from China, through use of its ballistic missiles, is also present. The future security environment does not look easier for Japan.

In 2012, the U.S. National Intelligence Council predicted that by 2030 a great diffusion of power will have occurred, and a multipolar world will dominate. However, a potential “game-changer” in their prediction was whether rapid shifts in global power would spark more conflict (National Intelligence Council, 2012).⁶²⁵ The document predicts China (and India) will rise high and rapidly, and both Japan and the U.S. will decline in relative strength. Could Japan’s future be one of regional conflict, allied perhaps with India and other Asian democracies against China? If so, Japan’s BMD, its political and military posture in the next several years, and its relationship with the U.S. and others will become increasingly pronounced elements in its national security. Further, pressures to acquire offensive strike forces, including nuclear weapons and means of delivery, may rise to address these challenges.

Potential Japanese Military Choices.

⁶²³ Page 32-3. See Chapter 1, Section 3 entitled, “China.”

⁶²⁴ See the section, “Medium-Range Missiles.”

⁶²⁵ See the chart entitled, “Global Trends 2030: An Overview,” page ii.

Japan's BMD provides it a capability to defend and deter North Korean ballistic missile threats and related political coercion. This capability is particularly important in day-to-day and crisis scenarios, including missile tests and small-scale missile attack raids, short of general war and below the threshold of U.S. extended deterrence punitive options. Japan's BMD will also improve in the future with deployment of the new SM-3 missile around 2018 giving it advanced engagement capabilities including the potential to engage enemy ballistic missiles early in the missiles powered flight "boost phase." One key advantage to boost-phase intercept is overcoming any countermeasures, such as warhead decoys deployed on the enemy ballistic missile, since boost-phase intercept destroys the missile before such countermeasures have a chance to deploy (later in flight), thus making the prospects of successful intercept higher (Wilkening, *Keeping National Missile Defense in Perspective*, 2001).⁶²⁶ This type of capability may also decrease the challenge of defending against mobile ballistic missiles in North Korea. Japanese air and naval forces, likewise, provide it defense and deterrence capacity against limited North Korean attacks. For example, as part of Japan's military upgrade, and with an eye on both North Korea and China, it selected a purchase of 42 F-35 stealth fighters from the U.S., a capability described by the Pentagon as a strategic conventional deterrent in the region (Takenaka, 2011).

⁶²⁶ Dean Wilkening is a leading U.S. physicist on BMD. See the section entitled, "Boost-phase alternatives." While being able to engage adversary ballistic missiles, including North Korean missiles, early in their boost phase of flight has been the preferred, but lacking, option with BMD capabilities, the National Research Council (NRC) suggests this could change with the deployment of the SM-3 Block IIA, under co-development by the U.S. and Japan. In a response letter to questions from Congressmen Turner and Sanchez, members of the NRC claimed boost-phase defense would be feasible in a scenario where a North Korean ICBM was attacking Hawaii using "an SM-3 Block IIA equipped Aegis ship in the East Sea, provided weapons release authority had been delegated" (Montague & Slocombe, 2012); page 5. According to the Missile Defense Agency (MDA), the SM-3 Block IIA is scheduled for deployment in the year 2018 (Missile Defense Agency, 2013); see the section, "International Efforts."

The one basic military capability Japan lacks, though its strategists and scholars had discussed it, is the ability to provide indigenous punitive offensive forces that could reach North Korea (and beyond), using either longer-range aircraft, naval assets, or ballistic missiles. For example, one of the consequences from the 1998 TD-1 launch over Japan was a formal call for science and technology research into developing an offensive ballistic missile, with a range of several hundred kilometers, capable of attacking targets including enemy ballistic missile sites ('Peace constitution?' Japan plans precision missile program, 2004). In 2006, after the July North Korean ballistic missile tests, Japan's Prime Minister Abe suggested "there was need for debate on whether Japan should develop a preemptive strike capability" (Hiyama, 2006). After North Korea's 2009 TD-2 missile test, Japan's Liberal Democratic Party (LDP) defence policy committee said Japan should develop the capability to launch a pre-emptive strike against North Korea if needed to prevent a missile attack (Japan's LDP backs pre-emptive strike capability against North Korea, 2009).⁶²⁷ While Japan does not possess an offensive ballistic missile capability, some argue it is already significantly advanced toward that possibility. For example, the Nuclear Threat Initiative reports Japan's "space program includes a number of technologies that could potentially be adapted to serve as long-range missiles" (Nuclear Threat Initiative (NTI), 2013).⁶²⁸ Japan also gains ballistic missile technology from its BMD expertise.

The prospects of Japan "going nuclear" do not seem to be high at the present. On the one hand, according to Lars Abmann, a former Japanese Liberal Party leader told a senior Chinese military official over 10 years ago that Japan could build upwards of

⁶²⁷ This debate includes overcoming some hurdles for Japan's pacifist constitution.

⁶²⁸ See the section entitled, "Missile."

4,000 nuclear warheads within months if a political decision was made to do so (Abmann, 2007).⁶²⁹ But on the other hand, going nuclear would require a large nuclear force to deter potential adversaries (North Korea, China, or Russia) and would also need to be effectively hidden from enemy strike. Japan's net security would, arguably, be lower with nuclear weapons (Abmann, 2007).⁶³⁰ Some things could, however, change Japan's calculus. One way to consider how Japanese perceptions could change is to consider the dynamics in play in the perceptions of Taiwanese and South Korean calculations when they "rolled back" their fledgling nuclear weapons programs. This is the analysis conducted by Rebecca Hersman and Robert Peters. Their analysis indicated the key decision-making perceptions revolved around three factors: their strategic relationship with the U.S., internal domestic factors, and their perceptions of the security environment and implications of security-related changes (Hersman & Peters, 2006).⁶³¹ For Japan, such factors could work in reverse over time. For years, Japan has recognized increasing threats, and its threat perceptions have diverged occasionally from those of the United States. Further, U.S. credibility has declined in Japan's perspective and U.S. relative power polarity is also expected to decline. On the other hand, Japanese domestic dynamics may support acceptance of greater political and military responsibilities for its own security. These circumstances could combine to create the conditions under which Japan becomes a nuclear weapons power. Possession of a robust BMD capability would

⁶²⁹ Pages 316-9.

⁶³⁰ Pages 324 and 335-6.

⁶³¹ Page 548.

complement offensive capabilities, but raise concerns in China and a greater Korea of Japanese preemption.⁶³²

BMD, offensive ballistic missiles, capable strike aircraft, and the potential nuclear capability Japan could foster, together provide Japan a hedging strategy to become a more formidable offensive military power in the region to counter emerging dangers stemming principally from China. Even without a nuclear weapons capability, an indigenous capacity to deliver punitive, even possibly preemptive, conventional strikes would give Japan significant options to deal with future scenarios.⁶³³ Development or acquisition of such capabilities would be costly, however, and without question add additional risk to Japan in crisis or conflict. For example, developing offensive strike capabilities can create a spiral of negative reciprocity in which North Korea may respond to Japan's offensive capability option decision with more serious provocations, expanded offensive and defensive capabilities against Japan, or both. It could even create conditions in which North Korea could, with a large number of ballistic missiles, preempt Japan's actions, though such conditions are difficult to imagine. The security challenges regarding China or Russia are also complex and the risks great. But, for Japan, the risks of *not* developing offensive military power at some point may be *greater*.

Deterrence Theory

⁶³² Such fears are not new. Lawrence Gershwin, a senior official with the Central Intelligence Agency (CIA), argued the Soviet Union was heavily invested in strategic defenses with a view of enhancing war-fighting capabilities through their defense and survival, ultimately improving chances not only of surviving a nuclear war but prevailing. Their perception of military advantage, he believed, could "embolden" them not only to take greater risk in crisis but to be more assertive or coercive with respect to foreign policy objectives (Binnendijk, 1986). Pages 57-8.

⁶³³ Separately, Mitsuru Kurosawa argues conventional weapons precision and power are "strong enough" to deter attacks and provide a more realistic response to attacks on U.S. allies, suggesting extended deterrence is no longer viable (Ghoshroy & Neuneck, 2010); pages 316-21. What he does not discuss, however, is whether Japan, under such circumstances, should develop its own conventionally-armed offensive capabilities to combine with its BMD to produce an indigenous deterrence capacity he advocates for the United States.

According to the U.S. Department of Defense, “deterrence operations” are defined as “integrated, systematic efforts to exercise decisive influence over adversaries’ decision-making calculus in peacetime, crisis, and war to achieve deterrence” (Quadrennial Roles and Missions Review Report, 2009).⁶³⁴ This is a statement that, on first appearances, provides a concise, adversary-focused, influence-oriented, and purposeful deterrence function. But this definition of deterrence is too narrow and fails to delineate general deterrence differences. The conceptual idea of establishing causal linkages from deterrent actions intended to be “decisive” in nature (Deterrence Operations Joint Operating Concept, 2006) is also inappropriate—this is simply an analytic bridge too far. Further, DoD’s efforts at elaborating the deterrence role of BMD, particularly in general deterrence conditions, are lacking.⁶³⁵ An illustration of the continuing challenge to understand the role of missile defenses in deterrence is the report by senior Northrop Grumman analysts in a paper entitled “Deterrence and Defense in ‘The Second Nuclear Age.’” In the report’s executive summary alone, nine times deterrence and defense were joined together but in all cases described as separate concepts. Deterrence is later defined to mean nuclear deterrence exclusively, though the authors recognized the nature of the threats, and how they might be deterred, were different than during the Cold War. Defenses were relegated to simply helping protect when deterrence fails, but were not recognized it seems for having deterrent value in

⁶³⁴ Page 5.

⁶³⁵ For example, in the historical review of missile defenses in the United States done by DoD’s Missile Defense Agency, the term “deterrence” appears only twice in the most recent 2008 report. The first is a reference to the Safeguard system deployed under President Nixon to protect part of the nation’s land-based nuclear forces, though a very short time later relegated to “bargaining chip” and subsequent deactivation as part of the ABM Treaty. The second reference was to the importance of missile defenses in a strategic policy shift under President Reagan away from an offense-oriented MAD framework to one that emphasized defenses (Kaplan, 2008); pages 11 and 13.

themselves (Haffa, Hichkad, Johnson, & Pratt, 2009).⁶³⁶ Like many other reports, Cold War era thinking was still present.⁶³⁷ From the broad ideas on deterrence, especially traditional ideas on general and immediate deterrence, it can be concluded deterrence-related activity of some sort and level is present to make deterrence operative—there cannot be deterrence effects without activities conducted by one and interpreted by the other. Further, deterrence activities need to be conceived and executed on a scale to be perceived but not to inadvertently escalate or trigger the behavior being deterred. But the traditional view of general deterrence falls short of this concept.

General Deterrence

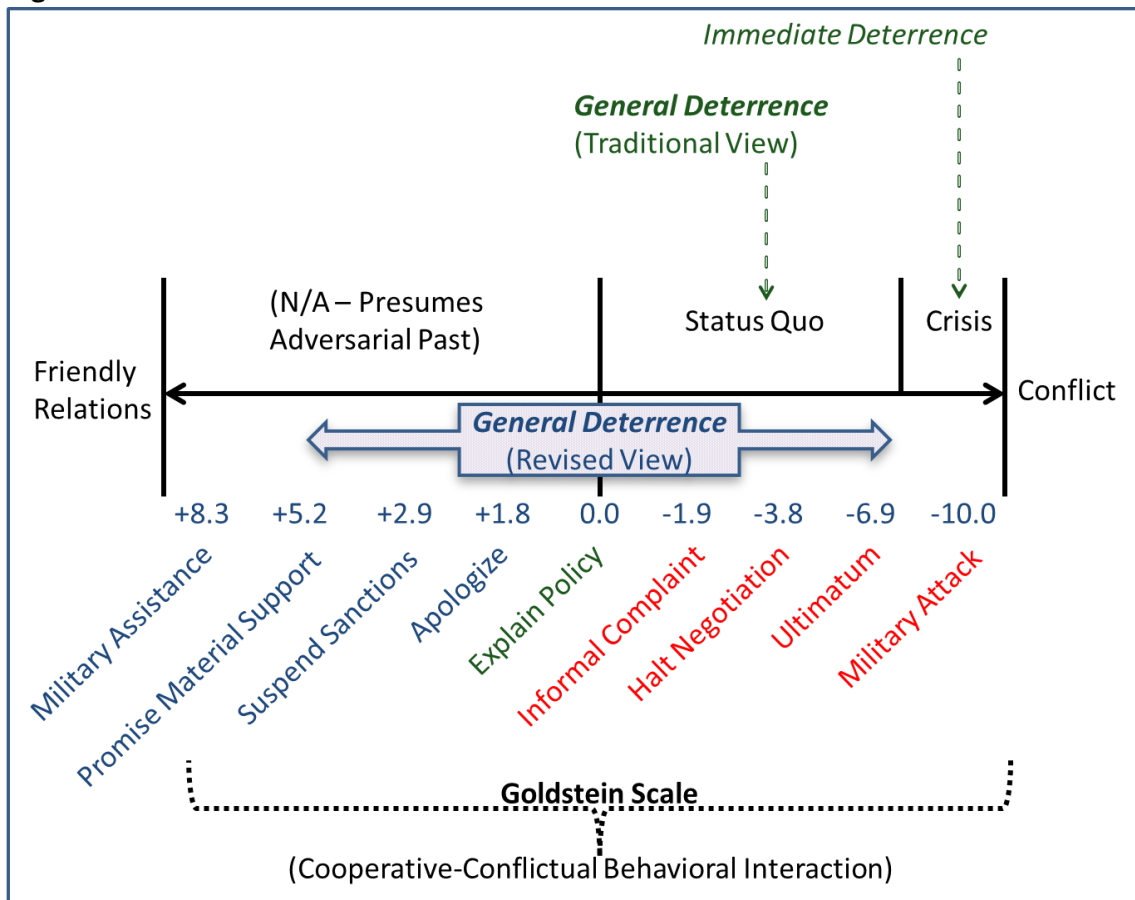
The traditional views on general and immediate deterrence, such as that presented by Huth and Russett, appear to be far too rigid if one is seeking to analyze and understand dyadic behavioral interaction over time below the threshold of conflict (Huth & Russett, *General Deterrence between Enduring Rivals: Testing Three Competing Models*, 1993). In the traditional view, both actors are either in a general deterrence status or one actor (i.e., the adversary) chooses to act belligerently and create a crisis that has the potential of escalating to armed conflict. Because the two states have a history of conflict of some sort, their adversarial relationship is presumed to rarely reflect significant or recurring cooperative interaction. This traditional view is seen in the top half of Figure 4. Bruce Bueno de Mesquita and others also focus attention in general deterrence writing in adversary choices about going to war and kinetic cost-imposition activities (Bueno de Mesquita, *Pride of Place: The Origins of German Hegemony*, 1990). Further, the analysis

⁶³⁶ Pages 1-2.

⁶³⁷ See also: William Van Cleave, in Robert Pfaltzgraff's edited volume (Robert L. Pfaltzgraff, 1996), page 100; renowned thinkers and practitioners placed BMD into the mix of military capabilities with deterrent attributes (*The Changing Nature of Ballistic Missile Defense*, 2009); page 2.

by Quackenbush did not explore behavioral interaction over time or the role of BMD (Quackenbush, *Understanding General Deterrence: Theory and Application*, 2011). On the other hand, Joshua Goldstein's scaling of the various WEIS categories, captured in the more modern IDEA framework utilized in the dissertation's dataset, provided an ordinal characterization of both cooperative and conflictual dyadic interaction across a wider range of behavior that more accurately reflects the realities of dyads under general deterrence conditions. This is seen in the bottom half of Figure 4. Using cooperative and conflictual empirical data drawing upon this type of scale also reflects the range and nuances of potential behavioral interaction suggested in the missile defense-deterrence literature. This also permits general deterrence to be better understood with greater fidelity of the gradients of behavior, including positive changes in adversary cooperative behavior, using a more complete set of *criteria* for deterrence effectiveness assessment under general deterrence conditions. The dissertation research of North Korean behavior toward Japan as a general deterrence effect of Japan's BMD program suggests general deterrence could be expanded conceptually to incorporate this level of interaction, particularly with a view toward aiding a deterrer establish, or reestablish as necessary, norms of acceptable behavior in the dyadic relationship with deterree.

Figure 5: Traditional General Deterrence vs. Goldstein Scale



Tensions between General & Extended Deterrence

While strategies and actions taken in general deterrence conditions can influence how an adversary may calculate under immediate deterrence conditions or conflict, including scenarios involving a security guarantor like the U.S. providing extended deterrence, the presumption that strategies and actions taken for the purposes of wartime extended deterrence requirements influence general deterrence coercion and provocative behavior is dispelled in the Japan-North Korea case. In context of this relationship, North Korea might purposely increase conflictual behavior toward Japan without any intent on escalating to conflict and with the capacity to draw back from brinkmanship as necessary. This, in part, is why Japan's BMD, for example, may have had as much effect upon

North Korean behavior—Japan was not taking these actions simply to prepare for war; rather, they were conducted first to address North Korean coercion under general deterrence conditions. This might also explain why activities labeled overtly as strengthening extended deterrence only receive strong reaction from the North: they undermine North Korean stakes that are much higher than its coercion strategy—they bring the U.S., possibly the only actor with the capacity (and history) of conducting violent regime change—into the North Korean calculus.

The limits of the effectiveness of U.S. threats of nuclear retaliation against North Korea can be seen in the North's pursuit of a nuclear weapons program—a program that included fuel processing, testing of nuclear devices, and presumably the building of warheads. In 2005, for example, when fears existing North Korea would soon conduct its first nuclear test, the White House spokesman “warned” North Korea the U.S. had “a robust deterrent capability” to deter their nuclear ambitions (Faiola & Sakamaki, 2005).⁶³⁸ The North carried out the test in 2006. This suggests that warfighting capabilities, especially nuclear weapons for nuclear conflict, lack the credibility to be an effective instrument of general deterrence or even deterring provocative or crisis behavior such as pursuing a nuclear weapons capability. That is, this was likely less a case of the failure of U.S. nuclear weapons to deter North Korea than it was a failure to recognize the limits of nuclear weapons or to “tailor deterrence” with appropriate instruments of power.

Extended Deterrence

The practicalities of extended deterrence have also proven more difficult than years ago, suggesting BMD and other non-nuclear capabilities can confuse allies while providing improved conventional capacity. For example, in his comments following

⁶³⁸ See the report's section, “Sense of insecurity.”

meetings with South Korean military leaders, U.S. Secretary of Defense Robert Gates officially and publically defined BMD as a component of the extended deterrence security guarantees provided by the U.S. to South Korea. Extended deterrence also included U.S. nuclear and conventional strike capabilities (Defense, 2010).⁶³⁹ These three components also comprise U.S. extended deterrence for Japan. But if extended deterrence is a wartime security function, what is the role of missile defenses in general deterrence conditions? The policy did not explain. Confusion in Japan could also stem from U.S. explanations for how U.S. missile defenses solve the problem. For example, U.S. Air Force General Kevin Chilton, commander of U.S. Strategic Command, argued that a “North Korean dictator” could deter the U.S. from supporting a regional ally by threatening a future U.S. president “by saying, ‘You want to trade Seattle for Seoul?’ He can’t do that because of our missile-defense system” (Gertz, 2011). North Korea may not be able to deter the U.S. from retaliation in this case but, unfortunately, U.S. missile defenses do nothing for the protection of Seoul. Being able to defend the U.S. homeland from North Korean nuclear-armed ballistic missiles protects the “Seattle” portion of that mix, but the defense of the “Seoul” portion—and just as plausibly, Tokyo—cannot be accomplished by the U.S. homeland defenses since they are out of range. This means both North and South Korea may pay a great price, but not the United States. As a result, the defense of Seattle may be comforting to the U.S., but likely carries little soothing or assuring power if one is living in Seoul or Tokyo. Instead, for this equation to hold completely together regional allies need their own BMD capabilities.⁶⁴⁰ Perhaps this is

⁶³⁹ See Secretary Gates’ opening remarks.

⁶⁴⁰ In an effort to describe the extremely important role of U.S. national identity into the debate of why the U.S. has pursued national missile defense (NMD) capabilities, Natalie Bormann dismisses the ballistic missile threats of Iran and North Korea, suggesting they neither have the capability to threaten the U.S.

why Japan has been “underwhelmed with recent developments” regarding U.S. extended deterrence and how new capabilities, including U.S. missile defenses, fit into that policy (Murdock, et al., 2009).⁶⁴¹ According to the “Healey Theorem”—a formulation by Denis Healey, the British Minister of Defense in the late 1960s, “it takes only five per cent credibility of American retaliation to deter the Russians, but ninety-five per cent credibility to reassure the Europeans” (Murdock, et al., 2009).⁶⁴² The question is how far below ninety-five percent Japan considers itself.

More recently—and offering some clarity—Sugio Takahashi pointed out U.S. extended deterrence commitments with Japan were being updated to be formed by a core of “nuclear and non-nuclear strike forces and defensive capabilities,” as opposed to just nuclear capabilities and, in doing so, Japan was now partnering with the U.S. in extended deterrence (Takahashi, *Ballistic Missile Defense in Japan: Deterrence and Military Transformation*, 2012).⁶⁴³ But as Takahashi pointedly clarified, the only way Japan’s BMD can do this is by causing North Korea to launch so many missiles it would trigger U.S. retaliation—small numbers of North Korean missile raids (1-2 missiles or more), do not cross such a threshold, he argued. So, this type of “cheap-shot strike” by North Korea falls inside the range of activities within North Korea’s coercive strategy toward Japan, albeit at the higher end of that scale, but below the threshold of extended deterrence. The message from this seemed to be that Japan—and only Japan—was responsible for its

nor have they explicitly claimed a desire to attack. Instead, she argues, from a poststructural perspective, that U.S. identity is the key driver in U.S. decisions on a NMD system (Bormann, 2008). Pages 2-7 and 143-4.

⁶⁴¹ Page 15. Quote from James L. Schoff, *Realigning Priorities: The U.S.-Japan Alliance & the Future of Extended Deterrence*.

⁶⁴² Page 11. Quote from David Yost, “Assurance and US Extended Deterrence in NATO,” *International Affairs*.

⁶⁴³ Page 22. Updates were to a May, 2007 joint statement of the U.S.-Japan Security Consultative Committee (SCC).

defense for coercion, provocations, or even small sub-conflict North Korean missile raids.

Working together in general deterrence conditions is preferred, however. Only in January, 2013 did it appear that the U.S. and Japan sat down to talk through how they could collaborate together on general deterrence types of issues stemming from North Korea and China (Talks start with U.S. on new defense plan: Greater SDF role sought as China grows more assertive, 2013). The talks, sparked by North Korean missile and nuclear tests and aggressive Chinese behavior over the disputed Senkaku Islands, stimulated agreement at “strengthening cooperation in intelligence-gathering, surveillance and reconnaissance activities under normal circumstances, and to enhance deterrence.” The reference to “normal circumstances” was clearly an indication that day-to-day, status quo general deterrence interaction between the two is not where either party prefers and supports analysis in the dissertation that Japan’s security under these circumstances has been largely Japan’s to address. However, with the stakes rising, and U.S. credibility returning to the fore given its “pivot” to Asia, U.S. and Japanese policymakers may be searching for ways to align strategies and capabilities.

Norms

In a deterrence or coercive relationship like that of Japan and North Korea, some cooperative and conflictual behavior will always be present and, as a result, general deterrence in such a case should have a goal of norm-setting and bringing down the *level* of coercion to a lower, manageable, acceptable level. The dissertation’s *criteria for deterrence effectiveness* were helpful in assessing the presence and direction of deterrence effectiveness in the Japan-North Korea case and could be applied to aiding in

norm-setting, since norms are learned behaviors, as an activity of a deterrence strategy. In their discussion of perceptions and deterrence, D. Scott Bennett and Bruce Bueno de Mesquita observe countries “learn” about each other in their interactions. In doing so, the probabilities of decision consequences become sharper and more refined, reducing uncertainty in decision-making perceptions. One result can be the strengthening of the deterrer’s credibility (Bennett & Bueno de Mesquita, 2003).⁶⁴⁴

This idea of learning can possibly work with norms of behavior and show, over time, a change in North Korean behavior as it “learned” in its interaction with Japan. For example, Japan’s unfaltering commitment to a BMD program in each successive phase over time appears to have affected KJI’s perceptions resulting in behavioral shifts favorable to deterrence. These behaviors included cooperative engagement with Japan on political rapprochement as well as ballistic missile related changes in behavior such as less threatening flight paths and construction and use of a new facility for conducting missile tests launching south, away from Japan proper.

A “dialogue” of action and reaction, described by Thomas Rid in his description of the Israeli deterrence perspective (Rid, 2012), is also conceptually similar to that presented here. Further, the idea that deterrence is an iterative activity and should not be considered a “binary” function where it either succeeds or it does not (as many define it), is a central idea of this dissertation. Further, these conceptual ideas provide a different perspective of general and immediate deterrence conditions and can help provide conceptual ideas useful in understanding the North Korea-Japan case and others. For example, rather than general deterrence being a stable relationship between two otherwise hostile actors characterized by relative inactivity, and immediate deterrence being an

⁶⁴⁴ Pages 80-2.

acute crisis possibly preceding war, a single framework of norms, norm-breaking, and norm resetting, could describe the relationship between Japan and North Korea, and deterrence effectiveness connected to patterns of behavior relative to one's expectations of behavioral norms. This could also be useful in trying to understand general deterrence challenges with regard to cyber warfare between opponents or enemies.⁶⁴⁵

Missile Defense-Deterrence Arguments

As mentioned at the outset of this chapter, Appendix 2 provides another brief review of missile defense related theory in light of what has been learned from researching the central question in the Japan-North Korea case. In addition to providing theoretic background essential in understanding how BMD might strengthen or undermine deterrence generally, the function of the missile defense-deterrence arguments identified in Chapter Three can themselves be reviewed using the results from the Japan-North Korea case. The emphasis here is not on further analyzing Japan's BMD in their four periods but, instead, revisits the arguments and their theoretic utility. This supplemental review provides one way in which empirically-based findings from one case can be used to illumine the many theoretic arguments and represents an area of possible future analysis from a strictly *theoretic* perspective. See Appendix 2.⁶⁴⁶

Possible Contributions of the Dissertation Research

First, access to large amounts of data through use of digitized media files as a common practice—coupled with new technologies in automated data storage, access, translation, scanning, reading, interpreting, and reporting—permits use of such data for

⁶⁴⁵ "For instance, there is still no wide consensus on the norms covering conduct of states and international cooperation in cyberspace" (Defense of Japan 2012, 2012); page 93. See Chapter 2, Section 2 entitled, "Trends Concerning Cyberspace."

⁶⁴⁶ See page 339.

various forms of statistical analysis of state, organization, and individual behavior where none existed only a few years ago. Research can progress in many new directions related to general deterrence that were simply impractical in the 1990s and early 2000s. One possible strength of the dissertation deals with the notion of a repeatable process of exploring general deterrence effectiveness and trends using the design presented in the dissertation. The components of deterrence and capability theory, dyadic history, deterrence-oriented profiling of the adversary, use of empirical data for statistical analysis, and establishment of criteria for assessing deterrence effectiveness all appear to be necessary elements in drawing inferences regarding deterrence strategies under general deterrence or periods of sub-conflict provocative events. Use of datasets, such as that provided by VRA for the dissertation, could be a standard approach for research of various international relations challenges, providing methodological intersections through common data and data measurements. These challenges could include deterrence, allied assurance, proliferation, crises, and conflict, within dyadic relations or among several actors.

A second possible strength is the deterrence expectations of a BMD program as it evolves over time. The dissertation's approach may be unique in this regard. For those states, such as Saudi Arabia, Qatar or United Arab Emirates, contemplating initial deployment of their own BMD capabilities, the dissertation suggests defensively-postured BMD need not be expected to increase only negative, conflictual adversary behavior or only result in the undermining of deterrence. The deterrence results varied but may, especially with positive political interaction, include periods of increased adversary restraint across the years and BMD periods.

Third, as suggested by scholars in recent years, understanding the adversary, to the degree this can be accomplished, proved necessary in understanding the security needs and cultural values of the adversary—not simply the threats posed by his military forces—and the potential role, value, and expectations of a BMD program to deter that adversary.⁶⁴⁷ James Blackwell adds, “The reality of the growing complexity of deterrence means that we have much to gain from deeper understanding of how to apply the behavioral approach to deterrence operations” (Blackwell, 2011).⁶⁴⁸ This is especially relevant under general deterrence conditions where changes in behavior are smaller or harder to identify. Further, statistical measures of behavior may tell us of behavioral changes regarding deterrence but it is also important to delve deep into the research of the deterree to help explain such analyses. Payne argued, for example, “there is no substitute for understanding opponents to the extent possible” for deterrence strategy development (Payne K. B., *Maintaining Flexible and Resilient Capabilities for Nuclear Deterrence*, 2011).⁶⁴⁹ The insights from the historical research, literature review including BMD, and the strategic profile were all invaluable in working with the quantitative analysis in the mixed-method approach to better understand the relationship between Japan’s BMD and North Korean behavior. And, lastly, general deterrence may be best understood—and

⁶⁴⁷ Information gathering on adversaries has always been difficult. And it is recognized that states like North Korea are more daunting than others in trying to glean information needed for analysis. This broad idea was acknowledged in the wake of faulty U.S. intelligence about Iraq’s WMD in 2003. In a summary of a lengthy report on that issue, the limitations of intelligence collection was the first topic addressed:

“Intelligence collection has always been difficult against closed, highly secretive, and regimented societies that actively seek to conceal their conduct through denial and deception” (Office of the Press Secretary, The White House, 2004); see the first section, “Presidential Action.” However, as the dissertation has also argued, the proliferation of digitized, public domain information has reduced this challenge. See: (Office of the Director of National Intelligence, 2010), and (Office of the Director of National Intelligence, 2007).

⁶⁴⁸ Page 35.

⁶⁴⁹ Page 24.

measured—as differences in cooperative and conflictual adversary behavior. This should be explored further.

APPENDIX 1:

METHODOLOGY HISTORICAL BACKGROUND⁶⁵⁰

According to VRA, the IDEA (Integrated Data for Events Analysis) Event Framework evolved from the 1960s McClelland's WEIS (World Event / Interaction Survey) framework which had 22 Cue categories and 63 three-digit subcategories creating 81 nominal WEIS event forms.⁶⁵¹ Goldstein's weights were added to the 1990s WEIS framework providing a uni-dimensional scale (conflict-cooperation) applied to nominal event forms with 61 nominal WEIS events made amenable to *ordinal* analysis (see Table 8).⁶⁵² Also in the 1990s PANDA was created (Protocol for the Assessment of Nonviolent Direct Action) to provide a nominal framework congruent with WEIS and using Goldstein weights for ordinal analysis, but modified to: 1) highlight coercive and contentious but nonviolent event forms; 2) de-link events from actors to accommodate non-state actors and intra-state events; 3) specify civil society-government derived sectors; and, 4) specify the level of actor organization independent of the events, from nominal entities, to named individuals to ephemeral entities (e.g. crowds), to groups (e.g. ethnic), to organizations (e.g. corporate entities, civil society organizations and States) to compound organizations (e.g. intergovernmental organizations). In the 2000s, IDEA superseded PANDA while staying congruent with WEIS, expanding its event forms beyond the original 22 WEIS "two-digit Cue" categories to 249 events across three

⁶⁵⁰ The background information in this section stems from Bond's worksheet entitled, "Dyad Notes" (Virtual Research Associates, Inc. (VRA), 2012).

⁶⁵¹ In the original 1992 Goldstein study, 61 level-2 plus two level-one events were scored. Therefore, not all IDEA events had a one-to-one match with the original WEIS set. For events that were not scored in the original WEIS study, VRA took the average score for the events within that cue (Events Data 1990-2011, 2012).

⁶⁵² Table was constructed from information in Goldstein (1992).

levels.⁶⁵³ In doing so, IDEA: 1) extended the Goldstein weights (mainly through interpolation) to 86 nominal IDEA events amenable to ordinal analysis; and, 2) cross-mapped all IDEA forms to CAMEO (Conflict and Mediation Event Observations), MIDs (Militarized Interstate Disputes), and WH (World Handbook of Political and Social Indicators). In 2011, IDEA events were refined and the weights extended based on a multi-dimensional survey (locus, affect, mechanism, injury and damage) with weights applied to approximately 250 nominal IDEA events, of which about 150 were within the WEIS 22 Cue Categories.⁶⁵⁴

⁶⁵³ These are 2-, 3- and 4-digit forms of increasing detail; typically these low level event forms stem from specific research agendas.

⁶⁵⁴ Also, event form tags were added for economic, political and military domains, intended as an interim step towards open standard domain tags to support multiple multi-level event and weight frameworks across different domains and accommodating event reports data from various sources and languages. The dataset acquired from VRA for the dissertation, however, did not have these latter features in the dyadic data used for regression analyses.

APPENDIX 2:

INTEGRATION OF MISSILE DEFENSE-DETERRENCE THEORETIC ARGUMENTS

General

Table 9 provides an overview of how the mixed-methods analysis of the Japan-North Korea case in preceding chapters might apply to the various missile defense-deterrence theoretic arguments identified in the Literature Review. This analytic *integration* is not provided to reevaluate the qualitative or statistical analyses from earlier chapters but, rather, to revisit the many missile defense-deterrence theoretic arguments in light of analytic inferences from the case of Japan's BMD deterring North Korea. This uses the qualitative and quantitative analyses of the unique Japan-North Korea case to review the arguments in order to get a sense of which arguments may be related to the Japan-North Korea case. As seen in Table 9, there was some connection to all of the arguments. Using this integrated approach suggests some possible ideas, using the various theoretic arguments, into how Japan's BMD may have strengthened or undermined deterrence of North Korea. This is not a comprehensive analysis of all possible factors relevant to how the theoretic arguments correlated to Japan's four BMD program periods. For example, argument #2 ("Demonstrate stake/commitment to assure allies or coalition partners"), under the TD-1 column, includes four qualitative data relating to "Environment" factors ("Goal of splitting alliance," "1998 domestic BMD commitment," "1999 MOU w/U.S.," and, "No increased NK conflictual behavior toward Japan due to U.S. influence"). All four of these data strengthen deterrence and support the theoretic argument and the statistical findings in TD-1 that Japan's BMD

strengthened deterrence in that period. However, other theoretic arguments may have some qualitative data that goes both ways. For example, in argument #16 (“Deny or confound military or political benefits sought by adversary”), factors relating to Japan’s technology may strengthen deterrence in the TD-2 period, but North Korea may also perceive gains in the TD-2 period, even though the analysis indicates Japan’s BMD strengthened deterrence overall in the TD-2 period. A summary of this table is provided below.

The table reflects the 34 missile defense-deterrence arguments identified in the Literature Review that could relate somehow to the Japan-North Korea case. The thick black line separates arguments that BMD strengthens deterrence (#1 through #27) from those arguments claiming BMD undermines deterrence (#28 through #34). These are numbered in the far left column. The four periods of Japan’s BMD program are identified in the middle four columns, with the results of the statistical analyses in the heading (i.e., Japan’s BMD in the TD-1 period suggested Japan’s BMD strengthened deterrence in that period). The column to the far right includes the three broad categories of qualitative data contained in the Strategic Profile. Qualitative data from the Profile or elsewhere in the dissertation are contained in the various boxes under the four BMD period columns. Data entries preceded by a checkmark (✓) reflect data that strengthen deterrence; entries preceded by lines (≈) reflect qualitative data that undermine deterrence.

Profile Factors

The qualitative data dealing with KJI’s personal factors are related in many ways to his risk-propensity, his expectations, his general approach with external actors, and his personal style, such as his interaction with Japan in the rapprochement talks and summit

meetings in 2002 and 2004. While not yet deployed, Japan's BMD program development was present in the background of the normalization activities, with Japan's decision for acquire its own BMD coming in 2003. Japan's BMD did not, however, deny KJI his personal needs to portray a strong image at home and abroad including during the normalization talks with Japan. Domestically, he presented himself as a strong leader when it came to dealing with Japan, having armed the nation with ballistic missiles and strengthening his position. In reality, he was personally more even-handed or reasonable in his dealings with Japan and interactions with Japan's leadership. While North Korea changed behavioral patterns in its 2009 TD-2 missile test, if Japan would have opted to shoot down the missile, it may have changed KJI's image at home and abroad sufficiently to lead him to violent provocation with Japan. Japan's choice to employ BMD, but withhold from shooting the TD-2 down allowed KJI to "save face." He demonstrated strength to the world with the missile test, though he clearly compromised in how he carried out that test. Having the missile shot down may have been the worst outcome for KJI: being outdone technically (and militarily) by Japan; tarnishing his domestic image with all audiences; and, a direct external challenge to his source of sovereign strength, demanding a response and possible escalation he most likely did not want. By 2009, Japan's BMD had been operational for two years and North Korea was aware of this fact. Early pronouncements of the intended TD-2 flight, and compliance with UN air and surface vessel safety agencies, signaled restraint and, quite possibly, deference to Japan's BMD.

Regarding factors pertaining to North Korea's national identity and culture, some of the qualitative data reflect the domestic, national emotive and psychological

dimensions of North Korea's ballistic missiles. This includes high technology generally, as this is culturally significant to the Korean people from a historical perspective, but also missile testing and what these types of capabilities and activities may mean to the people collectively. For example, there is a sense of national pride connected to such activities, consistent with the identity and cultural values of North Korea and Korea generally, suggesting a belief in North Korea's prestige among nations, and not just regional actors. Japan's BMD did not deny the North Korean people their sense of national satisfaction, including emotive hostility toward "imperial" Japan. These identity factors are also intertwined with support for the nation's leader, Kim Jong-Il, the cultural father of the nation and orchestrator of national sovereignty and security.

In terms of environmental factors, North Korea also gained valued knowledge of Japan's BMD program, command and control, internal politics and risk-tolerance regarding BMD, rules of engagement (as publicly announced), and general reactions useful for North Korea's own military planning, including BMD countermeasures and alternative missile deployment schema. This is mentioned here to illustrate the complexities in deterrence analysis generally or in the Japan-North Korea case specifically. While Japan's BMD program during the TD-2 period indicated a reduction of conflictual North Korean behavior toward Japan, suggesting a comparable strengthening of deterrence in this period owing to Japan's BMD, North Korea likely achieved some gains in this period as well. Deterrence, therefore, cannot be conceived solely as a binary outcome with only one winner and one loser. Note that the North Korean gains mentioned above (i.e., gaining knowledge of Japan's BMD program) are essentially passive benefits from launching the TD-2. As a result, North Korean gains and

Japanese deterrence success can be achieved at the same time. Another example, and a more significant one for the threat to Japan, is the qualitative data regarding North Korean ballistic missile exports and domestic deployment trends. While Japan's BMD may have strengthened deterrence in the TD-1 period, and had not statistically significant effect in the Decide period, BMD may have had a role in North Korean choices in ballistic missile production, sales, and domestic deployment. It appears North Korean missile exports declined, according to Joshua Pollack (Pollack J. , Ballistic Trajectory: The Evolution of North Korea's Ballistic Missile Market, 2011), in part due to the impact of BMD in other regional markets, lowering the potential value of ballistic missiles available from North Korea. At the same time, however, North Korea maintained missile production to deploy more missiles at home, meaning North Korea incurred greater cost to its own missile force by keeping more of its missiles produced. One logical explanation is the need to have many more missiles available to overcome Japan's BMD. So, while BMD adds costs (#26) and helps in general deterrence conditions against "cheap-shot" raids, in the Japan-North Korea case the tradeoff is that BMD may also have meant an increase in North Korea's ballistic missile deployment (#18, #23 and #33) useful to North Korea to overcome Japan's BMD in wartime conditions. This is discussed further below.

BMD Periods

Under the TD-1 BMD period, most qualitative data entries reflect direct or indirect support for deterrence being strengthened by Japan's BMD. For example, while part of the North Korean long-term strategy has been to try to divide U.S. alliances with

Japan and ROK (argument #2),⁶⁵⁵ Japan's BMD actually helped strengthen the alliance in some ways. Others have also made the case North Korea is aware of Japan's BMD program (#3).⁶⁵⁶ Likewise, Japan could have committed significant defense spending on offensive forces, but instead opted for defensive BMD capabilities, clearly reflecting a defensive posture in Japan's case (#4).⁶⁵⁷ Japan's BMD also helps Japan shore up potential technological lags to North Korean ballistic missile capabilities (#9), as evidenced through its missile and, more recently, space-related activities. A recurring theme for North Korea is celebrating its technological successes, especially those that also guard national sovereignty and security (#11).⁶⁵⁸ BMD not only addresses the North

⁶⁵⁵ North Korea has shown a proclivity toward fracturing if not splitting regional actors from their partnerships and alliances with the United States. It has done so through various political and military activities under past general deterrence conditions, and could do so explicitly as part of its wartime strategy against multiple parties in a broader peninsular war. North Korea uses this strategy of reducing a regional actor's commitment in order to isolate it and improve the prospects North Korea will achieve its aims or advance its position. Further, use of ballistic missiles for coercive purposes, cost North Korea little: it can afford operational training and technical data that is needed as part of most periodic quality assurance programs for deployed systems. And missile production capabilities are sustainable in North Korea. So, launching the missile is already a useful activity with little associated costs. However, actions by others that could raise the costs of missile launches in peacetime, or diminish their effectual use in wartime, would be most unwelcome by North Korea. Economic or financial losses, either through sanctioning practices, or through North Korean modifications to its missiles needed to counter defenses would be detrimental to sustained use of ballistic missiles to coerce. See also: Umemoto Tetsuya (Tetsuya, 2000); page 135.

⁶⁵⁶ Some capabilities, intentions, or actions can remain ambiguous, both to North Korea and Japan, among others. North Korea may, for example, be unsure of ROK or U.S. war aims in a broader conflict on the Korean Peninsula. Japan, however, has been relatively unambiguous with respect to the capabilities and intentions of its BMD, and North Korea is likely aware of this. Political scientist Bob Switky suggests it is reasonable to assume adversaries pay attention to reports about BMD effectiveness. It follows, then, according to Boyd and Scouras, that the perceptions of the same adversary can be influenced the other direction, toward BMD credibility (Boyd & Scouras, 2009). See page 194 for both Switky's suggestion and comments by Boyd and Scouras. The assumption that North Korea and Japan are generally aware of the behavior and capabilities of the other is a necessary one in order for Japan's missile defenses to have influence over North Korean decision-making and, is therefore, an important consideration in the dissertation.

⁶⁵⁷ James Lebovic argues BMD will cause an adversary to take preemptive action and use his ballistic missiles early before BMD can be forward deployed in crisis (Lebovic, 2002). Pages 460, 463, 469, 474, and 481.

⁶⁵⁸ Avi Schnurr, Executive Director of the Israeli Missile Defense Agency, argued that missile defenses also deny an adversary domestic and political psychological gains sought by using ballistic missiles or conducting a missile test. Under some circumstances, an adversary may seek a limited "victory" by testing

Korean threat directly with defense-related technologies, but also works to counter potential new threats emerging from North Korea (#20).⁶⁵⁹ It also gives Japan the capacity to more quickly develop offensive ballistic missiles should it deem that necessary (#27).⁶⁶⁰ On a positive side, Japan's initiatives with BMD also contributed to furthering opportunities for political normalization of relations with North Korea, owing to the fact BMD would eventually undercut the North's coercive edge over Japan. As seen in the TD-1 column, Japan's BMD program development was no remedy for mitigating all North Korean perceptions or behavior, nor was this expected. More than just armament on parade from time to time in Pyongyang's celebrations, North Korea's ballistic missile program is a powerful instrument for retaining sovereignty—a fact that resonates with national pride and prestige and strengthens KJI's image (#11). Japan's BMD is also limited in denying North Korea domestic political support for its ballistic

a ballistic missile that goes unchallenged with missile defenses, gaining domestic support while intimidating neighbors at the same time. Without missile defenses, he argued, the adversary would have free reign with his ballistic missiles, thus undermining all aspects of one's deterrence (Schnurr, 2010). These ideas are part of his formal presentation as the panel's third speaker.

⁶⁵⁹ North Korea has a tendency for willingness to depart from agreements it feels are unfair or simply do not suit its liking or security. For example, it was willing to breach an agreement to forego developing nuclear weapons when it felt it was no longer in its interests to do so. It also sought to circumvent sanctions on proliferation, including missile or nuclear related technologies that turned up later in places such as Syria. KJI is also comfortable being in control; external arrangements that seek to constrain him are contrary to his personal style. Further, it did not agree with the interpretation of UNSC resolutions banning North Korean ballistic missile launches, activities North Korea felt were space-related. It is difficult, therefore, to suggest North Korea to be anything but noncompliant in some key security related agreements. In light of the changes made to North Korean ballistic missile testing patterns, it could be argued that Japan is in a position to be less susceptible to North Korean coercion. Further, it was with the *Japanese* that North Korea discussed extension of a ballistic missile test moratorium, a sign that it was Japan that held sway, at least temporarily, on North Korean missile tests. While North Korean missile tests resumed later, in light of Japan's BMD deployments in 2007, it should be noted that the tests changed in pattern.

⁶⁶⁰ Japan, for its part, has a missile program to support its space program—a capability that could be used to sharpen Japan's overall technological capacity or edge. This edge in technology could also aid in continuing its advancement of credible, effective BMD components and help it acquire the needed skills for converting its missiles into offensive ballistic missiles should it deem it necessary to do so.

missile programs (#32).⁶⁶¹ BMD also has negative consequences for China (#34),⁶⁶² not simply as a political supporter of North Korea, but because it challenges China's ballistic missile capability as it does the North's.

There were many positive qualitative data in the Decide BMD period column, despite the fact that Japan's BMD was not a significant factor in the statistical analysis for this period. For example, BMD may have been part of Japan's signaling, supporting other interactions with North Korea (#3).⁶⁶³ Japan's decision to acquire a BMD system in 2003 occurred between the two summit meetings between KJI and Prime Minister Koizumi. While no final political breakthroughs were reached, Japan's defensive BMD program (#4) did not disrupt the talks and may have contributed to their continuation in 2004. During the talks, and this period generally, BMD may have contributed to Japan's

⁶⁶¹ According to Robert Jervis, cognitive psychology suggests images that shape perceptions change slowly. He also states that the one deterring must use instruments of deterrence that matter to the adversary's values and must also realize when the adversary has little choice but to behave egregiously. Further, Jervis cautions one's domestic politics can distort the realities of others (Jervis, 1982-1983). Pages 9, 13, and 29. For Japan, then, missile defenses might only have the desired effect on North Korean behavior over a longer period of time, perhaps years. It further suggests ballistic missile defenses must somehow resonate with North Korean values, but without denying them opportunities to maneuver politically in ways acceptable to both parties. It can also suggest North Koreans might see Japan in certain ways, such as domineering brutes, in order to satisfy domestic audiences.

⁶⁶² North Korea used missile launches, including the 1998 test, possibly as a bargaining tool in its military-diplomatic campaigns. If so, the North Korean calculus of using missile launches seemed to have changed, however, as they prompted Japanese and U.S. BMD deployments resulting in negative perceptions in China. Such developments indicated North Korea would likely change its behavior with ballistic missile tests in the future (Pollack, 2004). In Narushige Michishita's chapter, "North Korea's Military-Diplomatic Campaign Strategies: Continuity versus Change." Page 71.

⁶⁶³ Uzi Rubin argues defenses and offenses should combine in strategy to maximize the deterrent effect upon an adversary's calculus before he acts. While he argues from the perspective of missile defenses strengthening Israel's retaliatory response capability against an attacking Iran, importantly he suggests it is missile defenses that provide the most "visible" measure of communication or signaling in influencing the adversary's decision calculus (Rubin, 2008). Pages 66-7. Visible communication from a defender to an opponent with missile defenses plays a central role in the Japan-North Korea case, particularly as Japanese leaders made strategic decisions over the years in increasing the program and especially since Japan operationally deployed its missile defenses.

stronger position (#16 and #25)⁶⁶⁴ and KJI's sense of reasonableness though there were limits to how far he would go (#11). It should also be noted that during this period North Korean ballistic missile production appears to have continued unabated, despite a reduction in exports, resulting in the steady fielding of ballistic missiles (#18).⁶⁶⁵ This would be in keeping with the admission of U.S. deterrence failures against North Korea (#21).⁶⁶⁶ Deploying a large share of missiles produced (rather than selling them) also raised costs for North Korea (#26).⁶⁶⁷ This, however, seemed to work contrary to the longstanding theory that BMD stymies ballistic missile proliferation (#23).⁶⁶⁸ North

⁶⁶⁴ David Yost suggests fewer policy analysts in Europe buy into the notion of deterrence by denial where an adversary is deterred by perceiving his operational objectives are not achievable (Yost, 2004). Pages 727-8.

⁶⁶⁵ One key unknown is the impact of Japan's BMD upon North Korean value in its ballistic missiles, at least as measured by North Korean ballistic missile production and domestic deployment levels. Disparity of analysts exists over production and deployment levels. At the very least, missile exports have trended downward for several years, though this may be explained by a variety of reasons. Value in ballistic missiles is likely still very high and sufficient missiles for operational, coercive and wartime purposes already exist in North Korea's inventory to preclude further production and deployment. A downward trend in production and deployment would suggest a partial loss of value.

⁶⁶⁶ Burns argues BMD in the U.S. was focused on defending against North Korean and Iranian missile threats and, therefore, dissuading them from ballistic missile proliferation. However, this strategy failed with North Korea as it continued to pursue a nuclear weapons capability and missile technology did not abate, possibly fearing regime change. North Korean nuclear and missile tests ensued, leading to Japanese choices on BMD (Burns, 2010). Pages 95-6. To avoid the same outcome as North Korea, U.S. missile defense strategy in Europe, therefore, would need to present the U.S., through NATO, as a "bigger" defensive influence over Iran's emerging nuclear and ballistic missile threats. In other words, Japan was not afraid of U.S. extended deterrence failure, per se, but of aggressive U.S. actions toward North Korea in its new post-Cold War power projection role that could lead to more aggressive North Korea choices and embroil Japan as a potential target of North Korean ballistic missiles.

⁶⁶⁷ Missile defenses would contribute to deterrence by helping deny the benefits an adversary would have in ballistic missile attack and raising the costs to an adversary by increasing his level of effort for any attack to be effective (Kartchner, 2002). Pages 2-4. Ashton Carter states it is important to understand the role of BMD when evaluating its utility in strategy. One goal is to raise the price of attack, or the price of preparing for attack, meaning the attacker's costs to launch the attack go up in numbers of ballistic missiles to types of accompanying technologies needed (Carter & Schwartz, 1984). Pages 102-3.

⁶⁶⁸ President Bush's security framework envisioned missile defenses specifically to "strengthen deterrence by reducing the incentive for proliferation" (Dudley, 2003). Page 11. See also: (Gompert & Arnhold, 2001); page 9. If North Korean ballistic missile production levels have trended downward in recent years, it could reflect the idea that it was not worth the costs associated with operational needs of attempting to overcome Japan's BMD system. This could also be suggested should North Korean ballistic missile sales decrease substantially. In this case, according to Joshua Pollack, they have, indicating, at least in part, that ballistic missiles are less appealing to prospective buyers without significant numbers that can overcome

Korea's ballistic missiles were also used in this period, though without overflying Japan, to strengthen KJI's foreign and domestic image (#32). China was also very concerned over Japan's choice to deploy BMD (#34)⁶⁶⁹ and, because of its alliance with North Korea, potentially weakening the deterrent efficacy of Japan's BMD in KJI's perceptions.

By the time of Japan's operational deployment of its BMD system (Deploy column), the prospects for normalization with North Korea had diminished significantly and KJI's position on relenting further on the abductee issue firmed (#6 and #11).⁶⁷⁰ Having defenses reduced fears of a surprise missile attack (#5)⁶⁷¹ and provided a calming effect on Japan's populace, however, eroding North Korea's doctrinal advantages of surprise and terrorizing an opponent (#10 and #11).⁶⁷² For the first time Japan's BMD provided a credible capability to defend itself, though BMD testing was not perfect (#12

regional BMD systems faced by those buyers. Pollack, in fact, makes such an argument for the impact of BMD explicitly to reduce buying incentives (Pollack J. , 2011). Page 416.

⁶⁶⁹ Japan's BMD system has drawn sharp criticism from China, not only because it thinks its limited ballistic missile arsenal is no longer as credible, but because China retains images of Japanese imperialism and brutality. Japan's BMD may be early protection for a later Japanese offensive posture that could threaten China directly or at least undermine China's goals of resolving regional issues, such as island disputes, with minimal resistance or conflict.

⁶⁷⁰ Robert Powell argues BMD, since it can significantly lower possible costs to the defender against ballistic missile attacks, makes the defender more resolute and willing to tolerate risk and escalate if necessary. However, this can work in two opposing ways. On the one hand, this could lead to nuclear confrontation or preemptive nuclear attack from large states like Russia. On the other hand, increased resolve of a BMD-possessing state could lead smaller regional actors to back down (Powell, 2003). Pages 88, 106-7. While Japan is hardly so risk-tolerant to accept nuclear risks in conflict with North Korea, BMD might, however, create sufficient perception of reduced costs of pushing harder with North Korea in general deterrence, sub-conflict conditions.

⁶⁷¹ Any potential North Korean doctrinal position of using surprise, or a history of surprise action, complicates Japanese planning, particularly in scenarios involving North Korean use of ballistic missiles that can strike in mere minutes. This provides North Korea a great advantage in coercing Japan through unspoken threats of sudden terror from the sky, a scenario with which Japan is all-too familiar. Roberts defines "crisis" in terms of threats under time stress. In this way, "short decision time distinguishes a crisis from a non-crisis, and increasing stress further heightens the salience of time" (Roberts, 1988). Page 60. Japan's BMD, as defensive capabilities, also reduce stress and increase time in the decision-making of both actors, thus reducing crisis potential or its duration.

⁶⁷² Like others, Handberg states the August 1998 North Korean TD-1 missile flight showed Japan's vulnerability, a situation magnified by a lack of offensive retaliatory capabilities. He argues, however, that an attack with WMD would be a game-changer to Japanese society as it would be slow or unable to deliver retribution upon North Korea while it struggled domestically. BMD helps sooth those fears (Handberg, 2002). Pages 133-4.

and #13).⁶⁷³ Technologically, Japan's expertise with BMD helped to undermine the advantages North Korea seemed to be gaining with its long-range missile capabilities (#16).⁶⁷⁴ On the down side, North Korea apparently worked to develop BMD technical countermeasures and field many more ballistic missiles (#15); these could be factors both in general deterrence and wartime conditions. Japan affirmed its reliance on U.S. detection capabilities and also demonstrated weakness in its BMD command and control during this time (#28)⁶⁷⁵ possibly emboldening North Korea to be increasingly conflictual during this period.

⁶⁷³ Stephen Quackenbush argued missile defenses that become "increasingly effective" deny the adversary capacity to exert influence over the defender (Quackenbush, 2006). Pages 533, 535, and 538-40. Japan's missile defenses have become increasingly effective throughout the course of their development and deployment. Both examples can be considerations in which Japan's missile defenses contribute to deterrence and stability against North Korea. Many have claimed the unreliability of BMD over the years. Critics of Japan's BMD system, or specific missiles or components of the system, take issue with missile failures or intercept misses. As reliability has increased, the credibility of Japan's BMD system in North Korea's assessment may also have increased. North Korea has, in the past, disclaimed involvement in certain actions, such as covert naval operations. So, it is possible it may not acknowledge involvement in ballistic missiles that strike or land in Japan, or at least not acknowledge culpability or hostile intention. This could occur by accident where a missile flies off-course (as has happened with other Taepodong missiles) or, less likely, flies to a pre-loaded target in Japan, launched "accidentally" or without KJI authorization. This could be done to test Japan's BMD under surprise conditions or the political resolve of Japan's leaders. It could also be done to stimulate Japanese compliance in some way toward a North Korean aim. BMD can provide benefits including protection against accidents (Krepon, 2003). Pages 191 and 195-6. Gordon Mitchell, in his examination of the BMD debate from a rhetorical perspective, argues the U.S. hides and lies about U.S. military capabilities and foreign threats in order to protect and aid the "military industrial complex." This is done by masking the lies in Cold War jargon of jeopardizing deterrence. The debate, and support for, BMD in the U.S. is but the latest, but biggest, example of this deceptive strategy (Mitchell, 2000). Pages 2-3. He cites three main missile defense "cases" of deception from public statements to support his argument, including: experimentations with the X-ray laser; accuracy of the Patriot missile during the Persian Gulf War; and, whether the U.S. Theater High Altitude Air Defense (THAAD) system violates tenants of the 1972 ABM Treaty (Mitchell, 2000). Page 24. Each of these cases receives a full chapter of material used to illuminate Mitchell's view of deception.

⁶⁷⁴ While North Korea possesses hundreds of ballistic missiles, only a portion of them can reach Japan. It is not known how many of these would be used against Japan in wartime scenarios, but North Korean planning against Japan, even in limited raid-type crisis scenarios, could be complicated or undermined or at risk of falling short of North Korean operational objectives. Political objectives, however, would be much harder to deny as simply launching against Japan may be sufficient in the North Korean calculus to create the needed coercive climate.

⁶⁷⁵ To be effective, Japanese BMD requires credible sensors, weapons, command and control, and doctrine (O'Donogue, 2000). Page 15. Attaining these would raise Japan's position in regional and global arms control and nonproliferation activities.

Perhaps the period with the widest qualitative support for the theoretic arguments was the TD-2 BMD period. This also supports the statistical analysis indicating Japan's BMD strengthened deterrence during this period. In the most pronounced event timeframe—the 2009 North Korean TD-2 missile launch—Japan, at the direction of its national leadership, employed its BMD for the first time (the term employment meaning the interceptors were manned and ready to fire). This had many effects and is related to several of the theoretic arguments in the TD-2 BMD period: Japan's populace was assured (#1),⁶⁷⁶ an important military and psychological advantage given North Korea's strategy and wartime targeting of Tokyo and other urban areas; it demonstrated a defensive posture that, coupled with North Korean early announcements and compliance with UN requirements, stymied any real prospect for U.S. preemptive strikes on the North Korean missile preparations (#3, #4, and #8);⁶⁷⁷ it raised North Korean uncertainties⁶⁷⁸ and reinforced North Korea's plan to conduct future missile tests from the

⁶⁷⁶ According to Japanese governmental sources, Japan's land-based PAC-3 missile groups defend Japan's major cities and all major Japanese islands (Nuclear Threat Initiative (NTI), 2013). See the section entitled, "Land-Based Missile Defense." This supports the idea that Japan's BMD is not meant simply to protect U.S. forces and bases in a U.S.-North Korea deterrence relationship, but they are there for the protection of Japan's interests including its population, governmental, and economic centers.

⁶⁷⁷ John Rood, Acting Under Secretary of State for Arms Control and International Security, in response to a question in a press briefing suggested missile defenses have benefits before the crisis posed by an adversary's launch of ballistic missiles, including both deterrent and dissuasive benefits. For example, BMD could help deter their use and provide a non-offensive option to respond to a missile launch if deterrence failed. Citing a 2006 case in which North Korea was stacking a missile for launch, Rood confessed the U.S. neither knew whether a munition was atop the North Korean missile nor whether North Korean intentions were hostile or otherwise. Possessing BMD, and placing them on full alert during that time, allowed the U.S. to avoid considering a preemptive strike or traditional "overwhelming retaliation" options. As such, BMD provided a purely defensive escalation control tool and was essentially a stabilizing capability (Rood, 2008). Rood's comments are in response to a question from Mounzer Sleiman with Al-Mustaqbal Al-Arabi. These are the types of benefits most likely considered by Japanese leadership for the value of missile defenses in Japan. In addition, North Korea deems deployment of offensive assets close to its border as provocative and has acted aggressively against such assets in the past: the USS Pueblo naval incident; shooting at the EC121 aircraft; the killings on the ground at the Panmunjom joint security area.

⁶⁷⁸ According to the U.S. State Department, missile defenses both complicate adversary decision-making and work to deny his objectives for using ballistic missiles or WMD. The way BMD does this was captured

Sohae facility in western North Korea (#6, #7 and #11),⁶⁷⁹ though testing the TD-2 in any fashion allowed North Korea to claim success in advancing its space capabilities; permitted operational defenses against North Korean missile threats to Japan, regardless of North Korean intent or Japanese target (#13 and #14); it compounded North Korea's ballistic missile-based planning, contributing to North Korea's pursuit of a road-mobile solid propellant missile system that can move to the field and launch more quickly and possibly undetected—a cost and a complication for North Korea, but if deployed a challenge to Japan's BMD (#15 and #30); it tempered Japanese inclinations toward offensive or nuclear capabilities (#21);⁶⁸⁰ it gave Japan confidence in its actions

this way: "By complicating his calculation of success, these defenses add to a potential aggressor's uncertainty and weaken his confidence" (Department of State, 2001). See the heading entitled, "Emerging Threats and the Need to Diversify our Approach to Deterrence." Such calculations rely on estimates of the probability their missiles will get through the defensive system. In this way, it could be argued Japan's missile defenses create such uncertainty and lower confidence in North Korean leaders' decision-making, possibly contributing in a significant way to alter North Korea's choices in launching the TD-2 in 2009 and other behaviors. See also: (Office of Technology Assessment, 1986). Pages 87-8.

⁶⁷⁹ Samson describes the features of the 2009 North Korean TD-2 missile test, providing a clear contrast with the 2006 and 1998 launches. First, in the 2009 missile test, what it called the Unha-2 space launch vehicle intended to place a satellite into orbit, North Korea provided prior warning and transparency of the test, informing both the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO) weeks in advance of the test and included danger areas where missile stages could fall. It also announced it would join the Outer Space Treaty and the Registry Convention for space objects. Second, North Korea apparently used a different trajectory in the 2009 test or a higher altitude, such that Japan's largest urban and economic centers were not in the missile's flight path or were not threatened sufficiently to pressure Japan to engage the missile with Japanese BMD available for the first time in the 2009 test. Lastly, some assess the 2009 missile employed a new and different booster, apparently incorporating Iranian SLV technologies to reflect a space, rather than an offensive missile, purpose for the 2009 missile. After the launch, U.S. General Victor Renuart admitted the missile was a space test and not an ICBM test and, therefore, was not engaged with U.S. BMD either (Samson, 2010). Pages 13-4. Further, fear of getting even its testing missiles shot down by Japan may increase North Korean uncertainties sufficient to warrant change in its missile testing patterns. For example, the change in 2009, or moving its missile testing facilities to a new launch site in western North Korea so it can shoot missiles south, may indicate North Korean preferences for greater certainty in its missile tests and reduction in potential complications.

⁶⁸⁰ Ballistic missiles, either directly or indirectly, serve a valuable coercive purpose for North Korea against Japan. Coercing Japan can bring several political, tangible, and psychologically emotive benefits to KJI, though he does not act independent of the influence of multiple factors. However, an interesting dilemma in North Korean behavior given Japan's deterrence strategy is that to deny Japan success in deterring North Korea is to stoke the fires inside Japan of sentiments of such erosion of effect upon North Korea

elsewhere, including assertiveness with China over disputed islands (#24);⁶⁸¹ and, it demonstrated a political willingness and military capacity to defeat a limited, “cheap-shot” strike with ballistic missiles if needed (#28),⁶⁸² increasing Japan’s credibility (#29).⁶⁸³ Other drawbacks included: the gain by North Korea of technical data of its missile and Japan’s BMD response by testing the TD-2 (#11 and #27); pushing North Korea to make other choices unfavorable to Japan, including BMD technical and employment countermeasures and development asymmetric coercive capabilities, such as competencies in cyber warfare (#30 and #31);⁶⁸⁴ and, BMD could further disincentivize

that Japan needed offensive conventional strike, and possibly nuclear, capabilities to sufficiently deter North Korea—an unwelcome prospect inside North Korea.

⁶⁸¹ Part of Japan’s rise in autonomy has involved an increase in its freedom of action. This is characterized militarily by increased capabilities, longer and further deployments, and more assertive operations including engagement with North Korean ships. But it is also shown in greater flexing politically, such as pursuit of a UNSC permanent seat. It is difficult to gauge North Korea’s views of such Japanese assertiveness or its causes. See also: (Crouch, Joseph, Payne, & Roehl, 2009). Pages 1, 3, and 8.

⁶⁸² North Korean ballistic missile use for coercive purposes may not involve direct attacks or raids with missiles upon targets inside Japan. If it did so, it likely has sufficient missiles to overwhelm Japan’s BMD system but North Korea would need to use a considerable number of its missiles or empty its stores completely. On the other hand, limited missile raids or tests used for coercive purposes could not effectively overcome Japan’s defenses unless they were used against undefended, or under-defended, targets. This is another area where North Korean ballistic missile production levels might offer insights into the North’s thinking about its ability to overwhelm BMD.

⁶⁸³ North Korea occasionally seeks to make its opponents look the aggressor, providing it justification for other actions or compensation. For example, North Korea claimed ROK control of certain islands the North claims as disputed gave it the right to shell those islands with artillery. Defensive strategies, however, give regional actors opposed to North Korea ways to confound the North’s approach as defenses can be merely responsive in nature. Under certain circumstances, it is possible North Korea could launch a missile toward Japan with the expectation Japan would engage it with its BMD. In this case, North Korea would be counting on credibility of Japan’s political resolve and technical capability of its BMD. North Korea could invite such a response possibly to isolate Japan from the U.S., give the North cause for some other premeditated action, or claim damages for losses. Such scenarios would require North Korean dependence upon Japan’s credibility. See Barak Mendelsohn’s discussion of this theoretic argument in an examination of the 1991 Gulf War (Mendelsohn, 2003); pages 84-8 and 96-7.

⁶⁸⁴ One way North Korea could enhance the capability of its offensive ballistic missile force is through development and deployment of various countermeasures on the missile to defeat an opponent’s BMD system. While doing so involved costs, such countermeasures may pale in cost to deploying a much larger number of BMD interceptors, new or enhanced radar systems, or developing new interceptors altogether. Some analysts suggest North Korea has in fact developed some countermeasures. According to Philip E. Coyle, the three easiest ways to defeat BMD are to build more offensive ballistic missiles to overwhelm the defensive system, use countermeasures to confuse defenses, and to go around known BMD systems with surprise methods of attack such as employing cruise missiles or terroristic strategies. The Achilles

China from agreeing to arms control measures of its offensive ballistic missiles and nuclear weapons in the future (#34).⁶⁸⁵

heel of BMD, however, is effective countermeasure (CM) capabilities, options North Korea has been developing and fielding since 1999. Such North Korean CM capabilities could include: separating RVs, spin-stabilizing RVs, RV reorientation, using radar-absorbing material (RAM), booster fragmentation, low-power jammers, chaff, and balloon decoys (Ghoshroy & Neuneck, 2010). Pages 43-8. For ideas on how countermeasures address an adversary's perceived costs of restraint, see: Kenneth Watman and Dean Wilkening (Watman & Wilkening, 1995), pages 22-3; and, Roberta Wohlstetter (Wohlstetter, 1962), pages 354 and 356-7. While ballistic missiles have been a centerpiece for North Korean intimidation tactics, not only against Japan but ROK and others, one fear is that effectively devaluing the North's ballistic missiles might have unintended and unpleasant side effects. For example, in addition to simply building more missiles to overcome defenses, North Korea could rather choose to use other means of delivery of conventional or WMD munitions, such as use of artillery or ground-based or seaborne delivery vehicles for WMD. It used artillery attacks against ROK sites in 2009, for example. It could also seek to coerce through other violent acts, as it did with the sinking of the Choenon ROK naval vessel. Or, it could use cyberspace attacks, as was done against ROK networks. Of note, however, is the lack of violent coercive attacks against Japan during the years such activity rose against ROK. See also: Julian Palmore and Francoise Melese (Palmore & Melese, 2001), page 214; and, Raymond Franck (Franck, 2002); page 222.

⁶⁸⁵ The UK's Ministry of Defence suggested in 2010 a high likelihood effective BMD would undermine "some states' nuclear deterrence" in the long-term (UK Ministry of Defence: Development, Concepts and Doctrine Centre, 2010). See the section entitled "Hot Topic – The Future of Deterrence." Page 77. Stephen Cimbala argues, from an arms control perspective, missile defenses create unnecessary "friction" for deterrence (Cimbala, 2002). Page 201. See also: John Newhouse (Newhouse, 2001); pages, 97, 101, 104, and 109.

Table 9: Overview of Theoretic Arguments and BMD Periods

	BMD Periods				
Missile Defense-Deterrence Argument	“TD-1” Deterrence Strengthened	“Decide” Deterrence Unaffected	“Deploy” Deterrence Undermined	“TD-2” Deterrence Strengthened	Profile Factor
1. Protect or assure domestic population				<ul style="list-style-type: none"> ✓ Doctrine to terrorize population ✓ Tokyo targeted ✓ Urban centers protected in 2009 TD-2 test 	•Environment
2. Demonstrate stake/commitment to assure allies or coalition partners	<ul style="list-style-type: none"> ✓ Goal of splitting alliance ✓ 1998 domestic BMD commitment ✓ 1999 MOU w/U.S. ✓ No increased NK conflictual behavior toward Japan due to U.S. influence 				•Environment
3. Create visible signaling or communication channel	✓ NK aware of BMD	✓ 2003 decision for BMD acquisition showed autonomy		<ul style="list-style-type: none"> ✓ Announced 2009 TD-2 test ✓ Communicated TD-2 path in advance 	•Environment
4. Communicate defensive posture	<ul style="list-style-type: none"> ✓ Reduced need NK must preempt ✓ Reduced anxiety of Japanese nuclear proliferation 	<ul style="list-style-type: none"> ✓ Modest NK reaction to 2003 deployment decision ✓ Sustained stable relationship; rapprochement opportunities 		✓ 2009 BMD employment removed U.S. preemption option	<ul style="list-style-type: none"> •Environment •KJI Personal
5. Help manage escalation or buy time for diplomacy			✓ Doctrine of surprise, initiative	<ul style="list-style-type: none"> ✓ Weeks notice in 2009 TD-2 test ✓ Japan’s people prepared 	•Environment
6. Defender more willing to escalate, take risks, or intervene; causes regional actor to back down			<ul style="list-style-type: none"> ✓ Japan more active ≈ KJI showed hardline image, increased risk-tolerance 	<ul style="list-style-type: none"> ✓ Employed BMD in 2009 ✓ Different NK TD-2 test pattern ✓ Later launches from Sohae 	<ul style="list-style-type: none"> •Environment •KJI Personal
7. Increase adversary uncertainties and complications to achieve military and political goals				<ul style="list-style-type: none"> ✓ Changed launch pattern in 2009 ✓ Moved launches to Sohae 	•Environment
8. Deploying BMD only in crisis is less provocative than deploying offenses				✓ 2009 defensive posture	•Environment
9. Provide defensive hedge against unforeseen future threats	<ul style="list-style-type: none"> ✓ 1998 was surprise ✓ Space, missile mobility show NK technical capacity 				•Environment
10. Provide rational non-emotive option less likely to result in unintended escalation			✓ Post-1998 Japanese fears reduced		•Environment
11. Deny adversary domestic psychological gain through ballistic missile test	<ul style="list-style-type: none"> ≈ Missile launches conformed to NK leadership, public expectations ≈ Satisfied NK emotive needs v. imperial antagonist ≈ National pride, prestige 	<ul style="list-style-type: none"> ≈ KJI did not fully capitulate on abductees ✓ KJI appeared reasonable in 2004 rapprochement talks 	<ul style="list-style-type: none"> ✓ Japanese public calm with BMD ≈ KJI appeared decisive when BMD first deployed 	<ul style="list-style-type: none"> ✓ 2009 test in different way ✓ New Sohae test facility ≈ Success in space 	<ul style="list-style-type: none"> •Identity & Culture •Environment •KJI Personal

12. Demonstrate credibility through successful intercept			✓ NK aware of BMD ✓ BMD program success ≈ Only limited defense against large-scale missile attack		• Environment
13. Protect against miscalculated, unauthorized, or accidental use/attack	✓ NK missiles failed, strayed in past ✓ Naval incident possibly unauthorized		✓ Deployed in 2007	✓ Employed BMD in 2009	• Environment
14. Provide damage limitation to operationally deployed forces				✓ Employed BMD in 2009 to defend any potential target	• Environment
15. BMD deployment schema complicates adversary operational planning			≈ Developing BMD countermeasures ≈ Continue missile production, deployment ✓ BMD lowers prospect of <i>any</i> attack	✓ NK altered test pattern with 2009 TD-2 test ✓ Developing solid propellant mobile missile technology	• Environment
16. Deny or confound military or political benefits sought by adversary		✓ Reparations withheld ✓ KEDO money withheld	✓ Deployed BMD in 2007 ✓ Matched NK value, achievements in technology	✓ Employed in 2009 ✓ Launching south from Sohae ≈ 2009 TD-2 test gained technical information	• Environment
17. Decreases pressure upon defender to take preemptive action	✓ Alliance fracture less likely			✓ No threat of U.S. preemptive attack	• Environment
18. Decreases adversary value of ballistic missiles; may build or deploy fewer	✓ Exported fewer	≈ Production, internal deployment maintained			• Environment
19. BMD cooperation creates a more formidable and resolute coalition	✓ NK goal of undermining alliance ✓ Extensive BMD cooperation with U.S. ✓ UN-sponsored sanctions	✓ 1999 MOU with U.S. ✓ PSI activities			• Environment
20. Strengthens arms control by hedging against adversary breakout or noncompliance	✓ History of repeated NK noncompliance of UNSCRs ✓ Doctrine of surprise ✓ Developing ICBMs ✓ Missile moratorium			✓ Developing solid propellant mobile missile technology ✓ Success in space ✓ 2009-present change in missile test patterns	• Environment
21. Provide a conventional deterrent that nuclear weapons or cost-imposition instruments cannot provide		✓ NK deterrence failures in light of U.S. nuclear deterrent	✓ BMD undercuts NK peacetime coercive strategy	✓ Reduces prospect of Japanese nuclear proliferation	• Environment
22. Strengthen nuclear nonproliferation by keeping Japan from pursuing nuclear weapons capability			✓ U.S. credibility gap	✓ BMD strengthens general deterrence and defense in conflict	• Environment
23. Dissuade adversary ballistic missile proliferation; more costly	✓ Missile exports down	≈ Domestic deployment maintained			• Environment

24. Protect defender's freedom of action				✓ Japanese more confident, assertive in region	•Environment
25. Reduce coercive power of adversary ballistic missiles	✓ Extended missile moratorium w/Japan ✓ Rapprochement talks enabled	✓ Developed BMD defensive capability to challenge offensive missiles ✓ Withheld reparations		✓ Employed BMD in 2009; NK changed missile test patterns	•Environment •KJI Personal
26. Raises cost to adversary by making him build many more ballistic missiles	✓ Sold fewer missiles	✓ Greater share of missile production went to domestic deployment			•Environment
27. Maintains technological edge useful in all missile-related capabilities	✓ Aiding Japan's space program ✓ Potential dual-use technology for offensive ballistic missiles			≈ NK military gained technical knowledge in missile tests ≈ NK gained technical awareness of Japan's defenses through missile tests	•Environment
28. Unable to provide perfect defense			≈ Imperfect BMD command and control ≈ Dependent on U.S. for earliest launch detection; surprise launch lowers Japanese decision, reaction time	✓ Can defend against limited raids; counters peacetime coercion ≈ Only limited defense against large-scale missile attack	•Environment
29. Contribute to defender's credibility; increases probability ballistic missile attack will elicit desired political response	✓ NK pattern of blaming others ✓ Doctrine of deception			✓ Employed BMD in 2009; NK changed missile test patterns	•KJI Personal •Environment
30. Cause adversary to develop or use new countermeasures, complicating defenses				≈ Developing BMD countermeasures ≈ Developing solid-fuel mobile missiles ✓ NK incurs costs w/countermeasures	•Environment
31. Push adversary to develop or use other or asymmetric means of coercion or attack				≈ NK asymmetric cyber capability ✓ Violent provocations centered upon ROK, not Japan	•Environment
32. Limited deterrent effect against adversary missile tests used for political purposes	≈ Strong image domestically ≈ TD-1 tested near NK 1998 Parliament election	≈ Resolute image externally; deterrence of external attack, encroachment maintained			•Identity & Culture •Environment •KJI Personal
33. Cause adversary ballistic missile proliferation	✓ Export reduction possibly caused by BMD's effect on missile demand, value	≈ Maintained domestic missile deployments despite export reduction			•Environment
34. Exacerbate tensions with other potential adversaries	≈ China significant influence over cooperative NK behavior toward Japan	≈ China outspoken opponent of Japan's BMD; fears Japanese militarism, proliferation		≈ Complicates future arms control with China	•Environment

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